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Thorn on the rose

Between the dark wall of the Taurus and the glittering blue of the Mediterranean lies a flat half-moon of Turkish soil which is the richest in all Asia Minor. Cut by the surging waters of three great rivers which, century by century, layer on layer, have spread their silt on the land, Cilicia Campestris is almost unbelievably fertile. Deep, dark brown and stoneless is its soil; near-tropic its climate, with heavy rainfall, sodden humidity and stifling summer heat—conditions utterly perfect for the growing of cotton. But no rose is without its thorn, even a rose of cotton. In the Cilician hothouse, pests are also prolific.

The Black Cutworm caterpillar (*Agrotis ypsilon*), is one of the first to attack, eating through the stems of the young seedlings at the earliest stage of growth. Damage can be extensive—and swift. Sometimes the entire crop must be resown more than once, even when the farmer had hopefully *doubled* his initial seeding rate to compensate for an expected loss. *Agrotis* species can be very expensive guests in the cotton fields.

Once again however—as with so many pest-threatened crops throughout the world—one of the group of Shell pesticides has provided the answer, and in this case protection can be given even before the seed is sown. Aldrin wettable powder, used as a seed dressing, has proved outstandingly successful against the Black Cutworm in Southern Turkey, eliminating time and money-wasting re-drilling and reducing handling and application costs. In addition, freed from the setback of early damage, the crop develops sturdily and is less susceptible to later pest damage, giving superior cotton at harvest. At a rate of only 1 kilo (2½ lbs) of 40% wettable powder to every 100 kilos (225 lbs) of seed, aldrin is both a very attractive and a very economic proposition to the cotton growers of the Cilician plain.



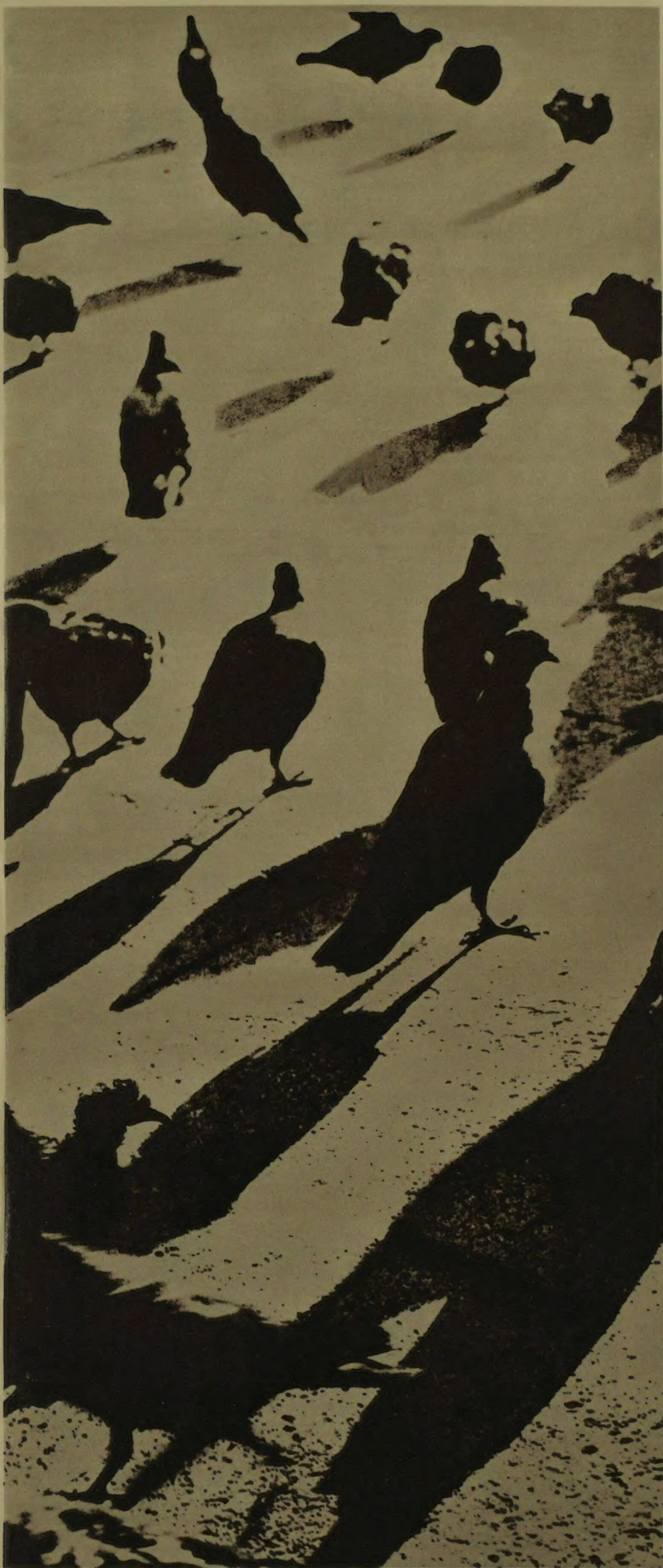
aldrin

Aldrin, the first of the advanced series of Shell pesticides for world-wide use, is especially for control of insects in the soil itself. Have you a pest control problem in your area? Between them, aldrin, endrin, dieldrin, Phosdrin, D-D and Nemagon offer control of virtually every important pest.

IN AGRICULTURE ... YOU CAN BE SURE OF



CHEMICALS



Black snowfall

You must eat a peck of it, they say, before you die. And a peck is a lot of dirt when you count it speck by speck.

Dirt. Drifting softly downwards over city and town, hour on hour, day by day, year by year. Corroding the stones where the pigeons feed, blackening brick and paint, soiling linen, poisoning greenness and eating metal, polluting food and water. Sweep it clean today and it will be back tomorrow; the black snowfall never ceases.

Even a generation ago, dirt was still fought with comparatively simple weapons. Soap and scrubbing brush, water and elbow grease. *Teepol* had yet to be invented. Today, product of Shell chemical research, it is in use throughout the world and is one of the world's greatest aids to cleanliness. Concentrated, neutral, non-toxic, soluble immediately in water, *Teepol* finds particularly important uses in the catering industry, in hospitals and public institutions, in offices and hotels, in public transport. *Detergents, glycols, resins, plastics. Base chemicals and additives, solvents, aromatics, synthetic rubber . . . Shell chemical production covers many groups and serves every industry. If you have a process calling for industrial chemicals, call on Shell.*

Teepol

Trade Mark

Teepol has other important uses in industry. Based on alkyl sulphates, it is a clear amber-coloured liquid and is an excellent wetting agent as well as a detergent, being widely employed as such in the textile industry. It is also extensively used in the processing of leather, fur, sheepskins; in engineering, concrete and paper-making. Almost every industry using water has a use for Teepol, either for wetting, emulsifying or cleaning.

IN INDUSTRY . . . YOU CAN BE SURE OF



SHELL CHEMICALS

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For further information consult your Shell Company (in the U.K., apply to Shell Chemical Company Limited).

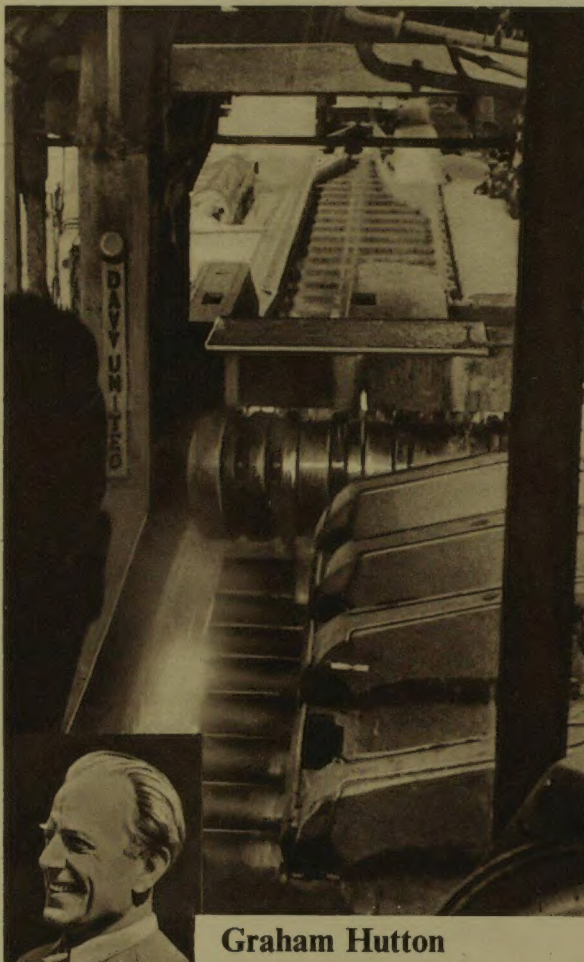
A brisk recap on one of today's vital topics

Everyone agrees one thing about Steel: it matters. Here, to keep you in the picture, are extracts from what five independent journalists have written about it in this series



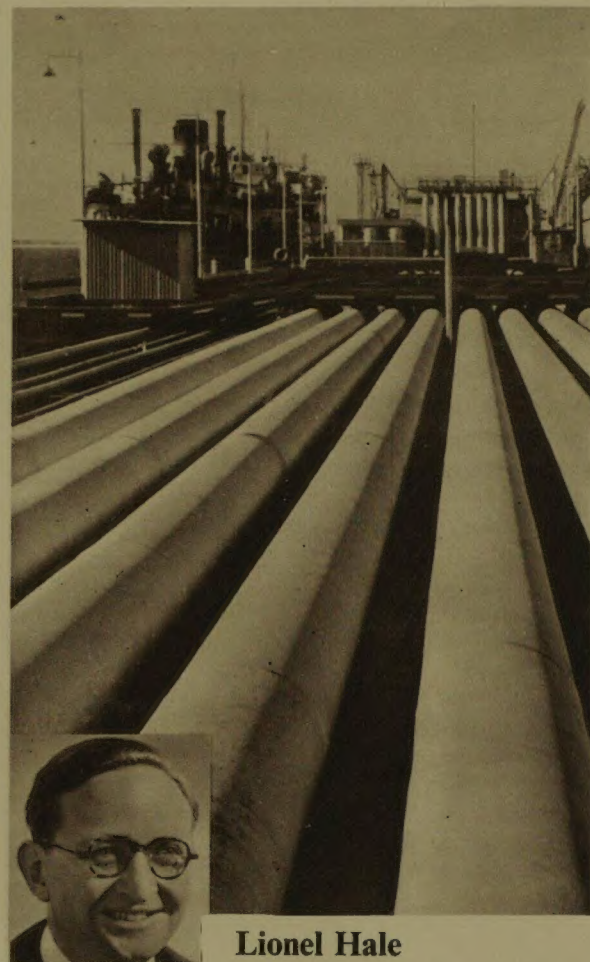
F. H. Happold

INDUSTRIAL JOURNALIST: "Britain needs the accumulated wisdom and diverse abilities of every one of her 300 and more steel companies. Without their ready, informal co-operation with steel users, industrial progress would grind to a halt."



Graham Hutton

AUTHOR AND ECONOMIST: "Demand for steel is advancing. Atomic power stations; fly-over road junctions; equipment for the world's industries; our own industries — all clamour for steel. To meet this challenge, the Steel Industry has planned to raise steel output by another third."



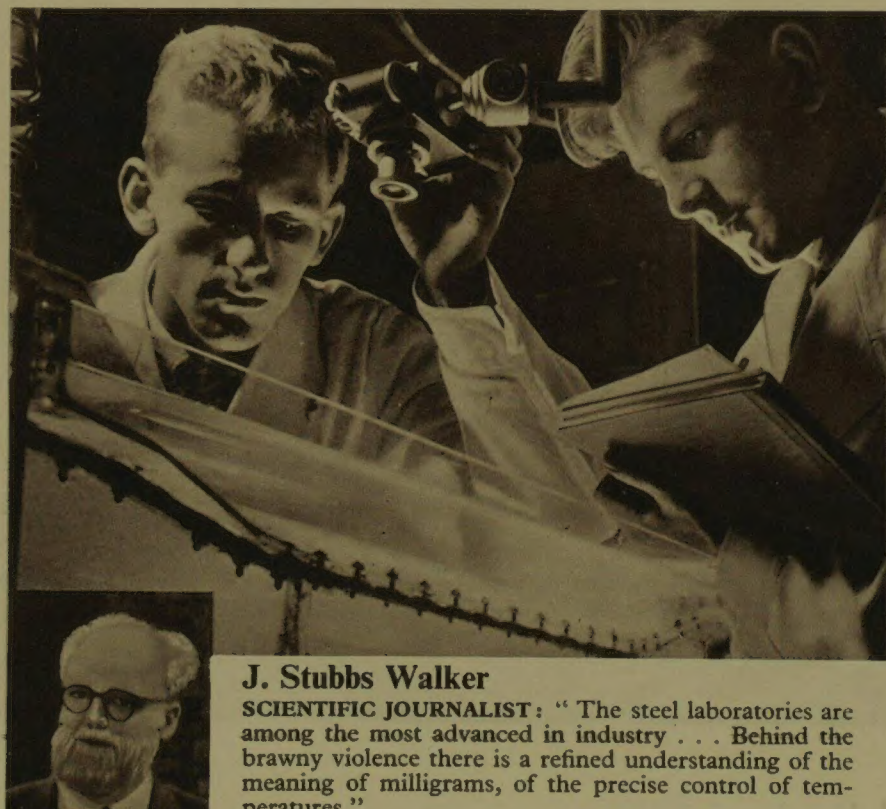
Lionel Hale

JOURNALIST, PLAYWRIGHT, BROADCASTER, wrote of "a curious air of calm and order . . . the strongest and cheapest alloy in the world . . . the beginnings of bridges that span far-off rivers, of razor blades, of railway networks, of your garden fence, or of a pipeline to be run across an eastern desert."



Trevor Evans

DAILY EXPRESS INDUSTRIAL CORRESPONDENT, wrote of "a remarkable record of internal peace . . . What can be wrong with an industry which commands the energy and loyalty of a lifetime's service from men of such pride and skill?"



J. Stubbs Walker

SCIENTIFIC JOURNALIST: "The steel laboratories are among the most advanced in industry . . . Behind the brawny violence there is a refined understanding of the meaning of milligrams, of the precise control of temperatures."

These reports were published by the British Iron & Steel Federation so that everyone in Britain should know the facts about Steel

Equipment for the Petroleum Industry

Rochester-based Company reports extended activities in the supply of field-proved equipment for Sterling payment.

The Centenary Year of the Oil Industry marks a distinct advance in the availability of British built Equipment of all types and its subsequent use in practically every oil producing country in the World.

It can be reported that Woodfield Rochester Limited have made a significant contribution to this desirable achievement. As designers in their own right and licensees for the manufacture in the United Kingdom of the popular range of Ideco Drilling and Production Equipment, Woodfield are supplying from their Works in Kent a range of Rigs, from those capable of drilling to the deepest depths to shallow well drilling and servicing depths. Included in this range is the supply and manufacture of all ancillary equipment required on the drilling site. In addition, Woodfield are actively engaged in the manufacture of Tanker Loading Equipment and the production of Winches for every requirement. Representative of this increased activity is the recent supply of the following items.

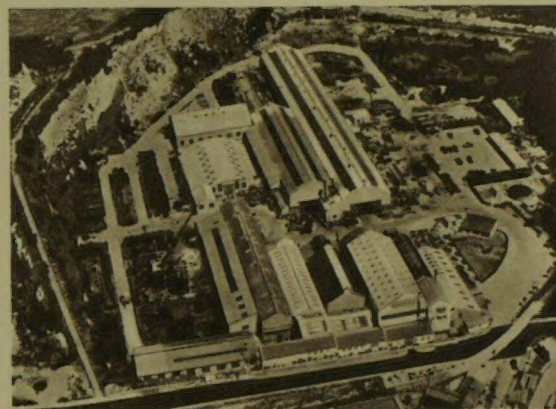
Drilling and Production.

Two complete Drilling Rigs for well depths of 7,000-ft. were shipped to Iraq, complete with Mud Systems, Transportation Equipment, Workshops, Power and Generating Sets, both for the Rigs and the mobile living quarters and equipped with every device and supply for immediate operations in the Kirkuk Area. Woodfield have added to the list of well over 300 Full-View Masts operating at this moment by the supply to Oilfields in the Middle East of both the Junior and the 143-ft.-high Full-View Masts, complete with sub-structures.

Mobile Drilling and Servicing Outfits have been manufactured by Woodfield since 1948 and have been supplied to the following countries—Algeria, Argentina, Bahrain, Borneo, Burma, Canada, Columbia, Egypt, Holland, India, Indonesia, Iran, Iraq, Kuwait, New Guinea, Nigeria, Pakistan, Saudi Arabia, Trinidad, United Kingdom and Venezuela.

Hauling and Hoisting.

Hauling and hoisting have been the business of Woodfield for 35 years, during which time Air, Electric, Diesel and Petrol Winches have been supplied to contractors and major Oil Companies requiring special performances. Woodfield Air Winches are used at many of the major Oil Terminals, due to the reduced fire hazard required for this type of



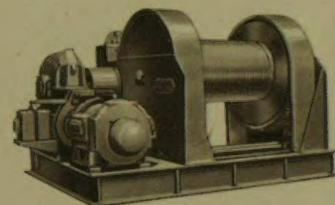
Woodfield Works and property cover 23 acres.

work. Electric Anchor and Slipway Winches for the heaviest duties are operating offshore for positioning of Drilling Barges and Platforms, with line pulls from the drum up to 40 tons.

Tanker Loading.

Woodfield Flow Boom Equipment is installed at many of the World's Oil Terminals, including Aden, Kwinana, Bandar Mashur, The Isle of Grain, Thameshaven, Finnart and Milford Haven. Essentially this system of tanker loading accommodates tankers from 200 tons to 130,000 tons capacity, a rise and fall of manifold height of 75 ft., a drift of 30 ft. in either direction and as much as 10 ft. outwards from the berthing line. The use of 10", 12" and 16" diameter hoses necessary for the fast turn round required under present conditions has been amply catered for by Woodfield Flow Boom Equipment.

Woodfield senior Technical Executives keep in constant touch with operators in the Oilfields, and in Refineries and Tanker Terminals, in order to provide the most appropriate equipment for this constantly developing field of operations.



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Frindsbury Works, Rochester, Kent

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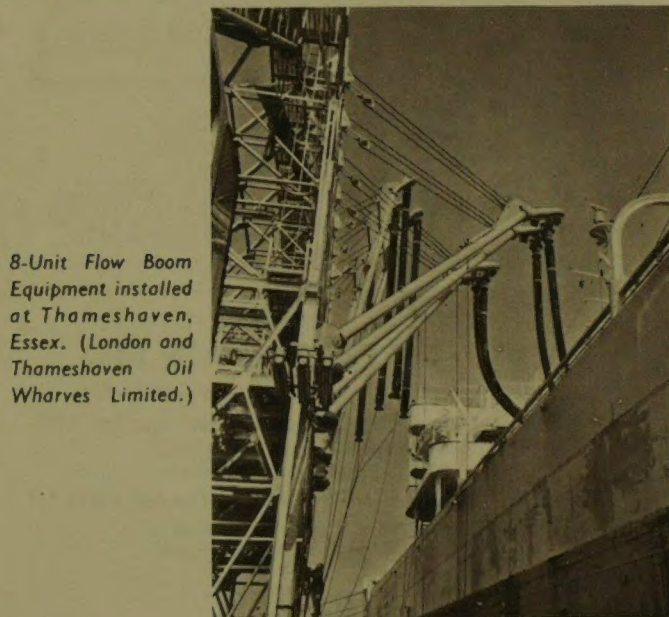
London Office: 147 Victoria St., London, S.W.1



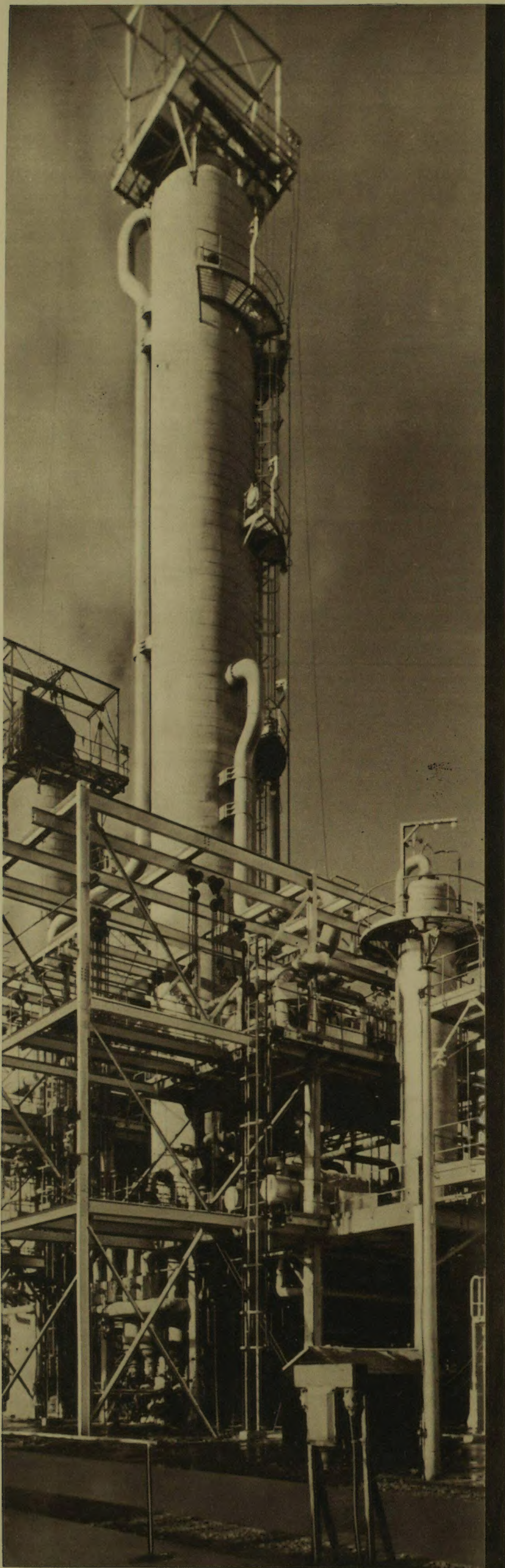
Ideco Woodfield Full-View Mast and Drawworks being skidded on location.



Complete Dual Rambler Rig prior to shipment to Middle East Fields.



8-Unit Flow Boom Equipment installed at Thameshaven, Essex. (London and Thameshaven Oil Wharves Limited.)



Udex Plant Stanlow Refinery where the Company carried out the mechanical engineering contract. The project was engineered by Procon (Great Britain) Ltd. Client: Shell Refining Co. Ltd.

Typical example of "snaking-in" overland pipeline.

View of main pipe tracks at the Shell-Mex & B.P. Ltd. Teesport installation where the Company carried out fabrication and installation of pipelines.

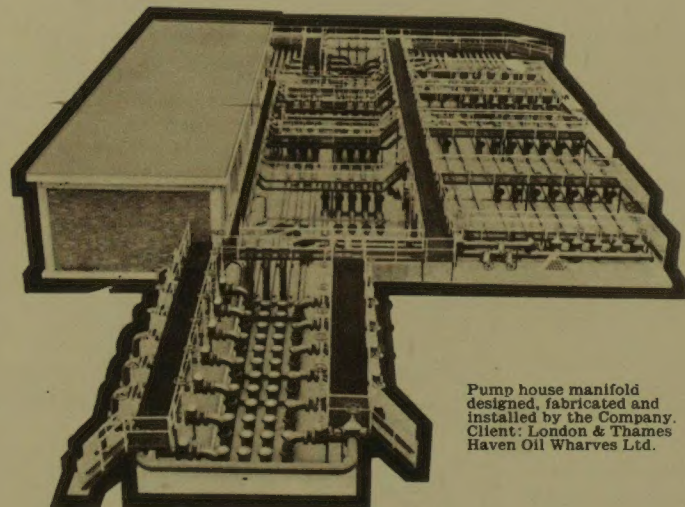
PRESS



William Press & Son Ltd. congratulates the oil industry on its centenary.

In refining . . . in storage . . . in distribution, the Press Group has played an ever-increasing part in this important and expanding industry. Construction work has been undertaken for all the major oil companies during the past twenty-five years.

Today the Press Group offers the industry a comprehensive service for the construction of refining units, bulk storage and distribution facilities, together with cross-country pipelines, fabrication of pipework and fittings and associated civil engineering and building work.



Pump house manifold designed, fabricated and installed by the Company. Client: London & Thames Haven Oil Wharves Ltd.



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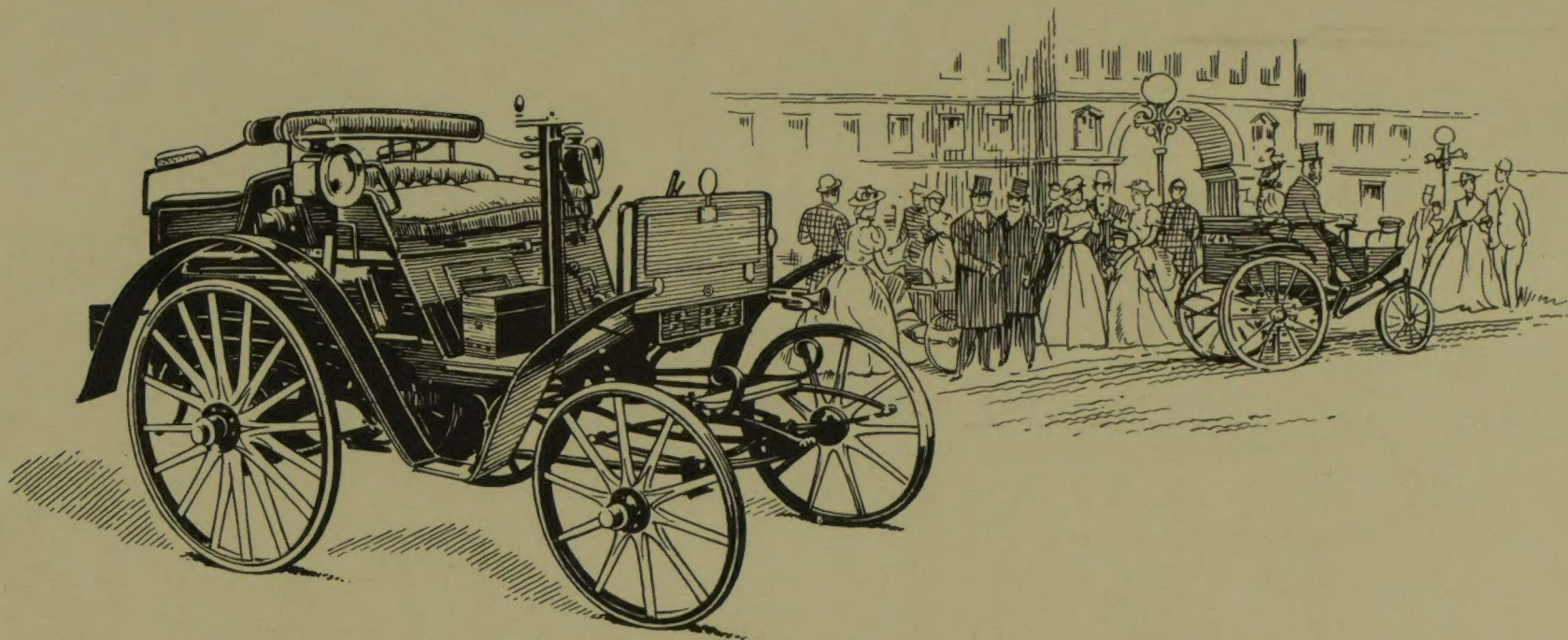
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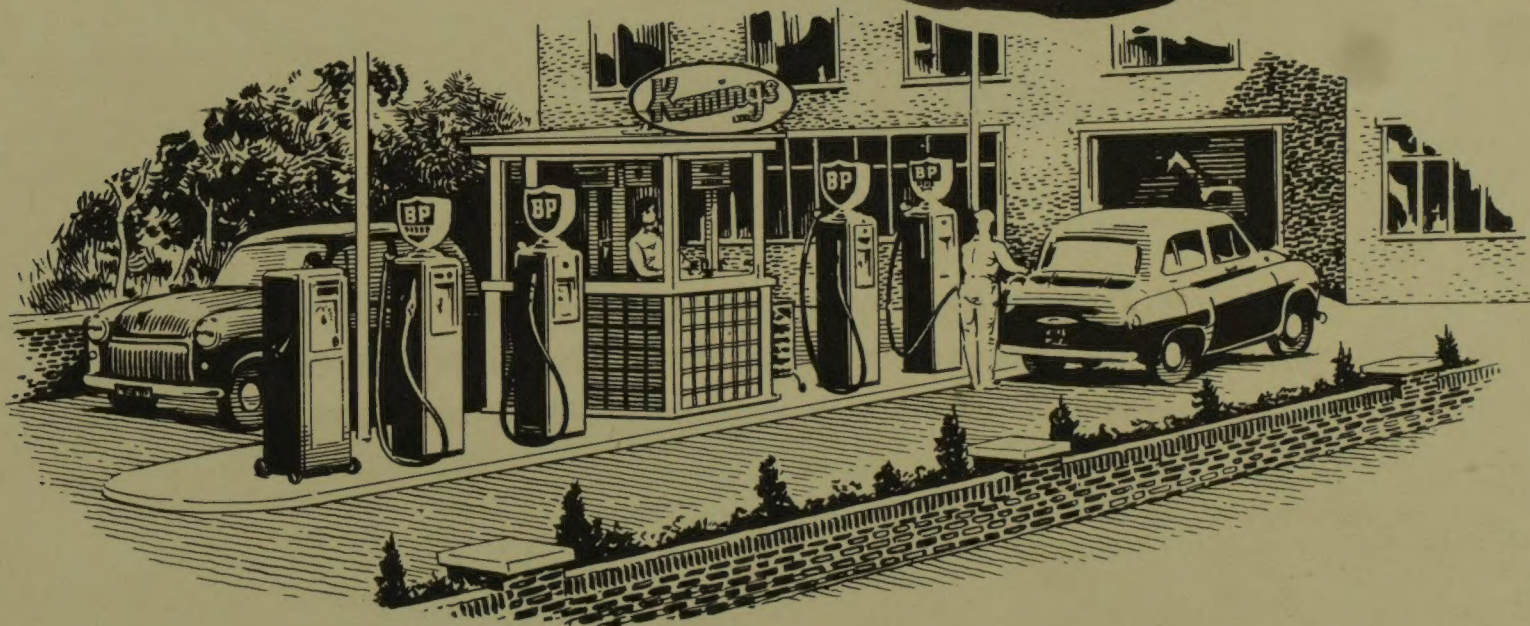
The



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Motor Group

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OVER 150 DEPOTS THROUGHOUT THE COUNTRY

Oil Industry Centenary: 1859-1959

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in the **OIL BUSINESS** in Britain
for over seventy years



In fact, since 1888. Then, and for many years, we were known as the Anglo-American Oil Company. Now you know us as ESSO, the oldest established oil company engaged in all major aspects of the industry in this country, with 14,000 British employees.

Seventy years . . . of service and growth and the use of more and more oil for more and more purposes. Now we are looking forward to our next 70 years . . .



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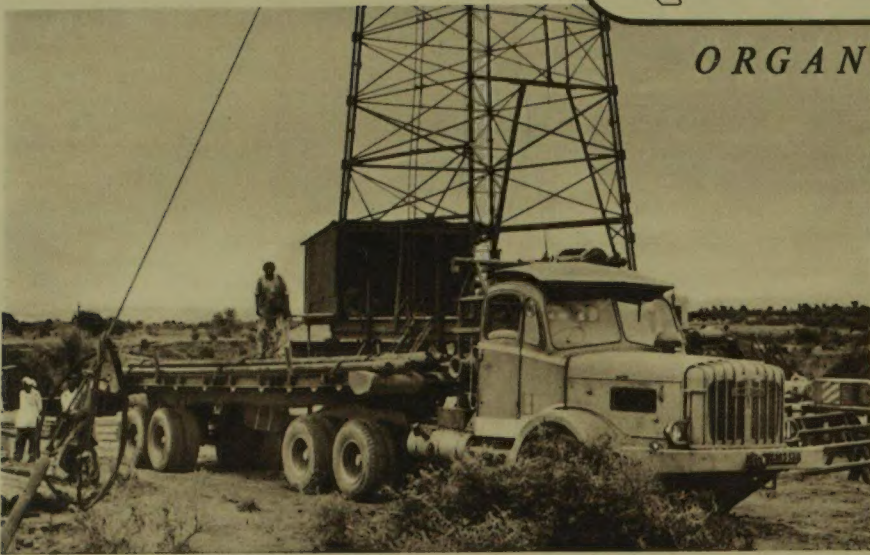
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Our illustration shows a "Big Ben" transporter operated by the Attock Oil Company unloading pipes at the Mahesian Test well.

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Our illustration shows one of a fleet of personnel carriers in service with Cia Shell de Venezuela on Lake Maracaibo.

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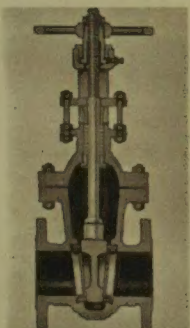
Abbey 8000

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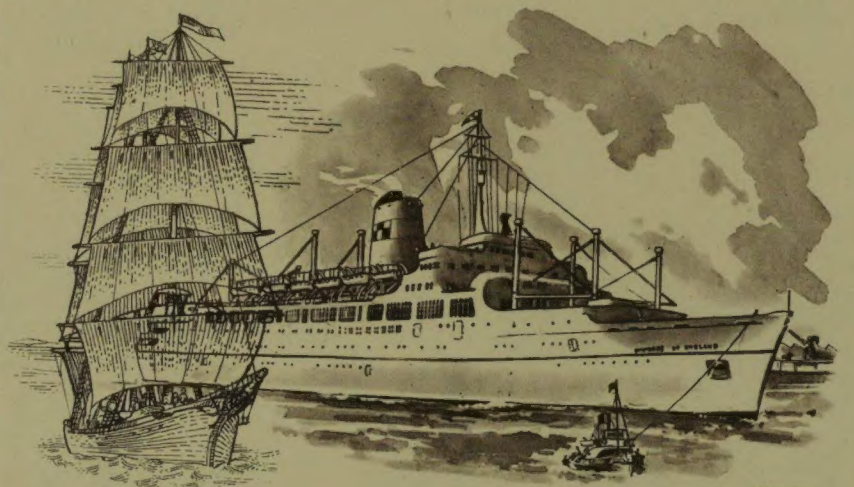
BRITAIN'S LARGEST VALVE STOCKHOLDERS

take their hats off to the Oil Industry
on reaching its Centenary, and at the
same time would like to mention that
they too are celebrating their
Centenary this year, as suppliers of valves
produced to exacting requirements



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An ocean voyage could be an uncomfortable experience in the days of the old sailing ships. Nowadays we relax in the lounge of a liner . . . a much more agreeable setting for the enjoyment of Lang's. On land, at sea or in the air . . . Lang's makes life more pleasant.

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The pearly blue of summer skies, the rosy cheeks of pretty girls . . . the subtle, muted colours of Britain's landscapes—you can capture them all on Ilford Colour Film.

And it's so easy—far simpler, if you have a 35mm camera, than black-and-white. Every picture brings a thrill—the thrill of colour, more vivid than you can remember it. So bring home a boxful of colour memories this year, on Ilford Colour Film. Twenty transparencies cost only 22/9 including processing—or there's a 36-exposure cassette at 34/1 and 828 roll film at 12/2. You can have the best of them made into Ilford Colour Prints—postcard size at four for 10/- or 5½" x 8¼" at 7/6 each including mount.

The amazing miniature — ILFORD *Sportsman*

No other camera gives you so much for so little! A superb 35mm miniature, the Ilford 'Sportsman' is so simple to handle.

Eye-level viewfinder with luminous guide lines, press-button release, rapid lever film-wind, Dignar f/3.5 lens and shutter speeds up to 1/200th sec.—they all make photography so easy, and ensure perfect pictures in colour or black-and-white.

Most amazing thing is that this beautifully styled camera costs so little. Examine the 'Sportsman' at your photo-shop—you'll be happy to pay £11.11.11 (leather ever-ready case 41/3 extra).



ILFORD COLOUR

life's simple pleasures

Of all the ingredients in old Omar's recipe for bliss, only one retains its ancient power. Jugs of wine are hard to come by; loaves of bread aren't what they were; and on the subject of 'Thou' we had better remain silent. But a Book of Verse, with or without the Bough, is still for many of us one of the real pleasures of life. Take down from the shelf a favourite poet and, in a moment, you are lost. What magic men have wrought with words! We have sometimes regretted that there are so few uses for poetry in banking. Did we, then, miss a golden opportunity when we introduced our now-famous Gift Cheques? There, surely, was a place for the well-turned phrase and the facile rhyme. But, on reflection, we think not. These warm-hearted bearers of goodwill are selling very well as they are. And poetry, as we know to our cost, is a tricky business. We might have ended up with verse. Or worse.



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SATURDAY, AUGUST 29, 1959.



(Above.)
SEARCHING IN THE REMAINS
OF THE DAKMASTER
CRASH ON A SPANISH
MOUNTAIN: THE
DISASTER IN WHICH 32
LIVES WERE LOST.

THERE were no survivors from the tragic air crash of a British airliner, a Transair *Dakmaster*, that crashed on a mountain peak north of Barcelona on August 19. The aeroplane had been chartered from Transair by the National Union of Students, and so among the 29 passengers there were 20 British students, nine of them girls. The *Dakmaster*, a

[Continued opposite.

(Right.)
A GENERAL VIEW OF THE
MOUNTAIN AND WRECK-
AGE: THE MOUNTAIN WAS
COVERED IN MIST AT THE
TIME OF THE CRASH.



Continued.]
modified form of the *Dakota*, crashed a few minutes after leaving Barcelona, about 2000 ft. up on a peak called Turo de l'Home in the Montseny range, 25 miles from the airport. First news came from the nearby Montseny Meteorological Observatory, and rescue work was begun immediately, but there was nothing anyone could do. The bodies were brought down by ambulance to Barcelona, where a post-mortem was held. Representatives of Transair and of the Ministry of Civil Aviation flew out to inspect the wreckage, which has been taken charge of by the Spanish Air Force. The Air Force is checking whether the plane was on its normal course at the time of the accident.

THE TRAGIC AIR CRASH OF A BRITISH AIRLINER NEAR BARCELONA: SCENES OF THE WRECKAGE ON THE MOUNTAIN.

Postage—Inland, 4d.; Canada, 1½d.; Elsewhere Abroad, 5½d. (These rates apply as The Illustrated London News is registered at the G.P.O. as a newspaper.)



By ARTHUR BRYANT.

ORGANISATION is an admirable thing, but, like most good things, can be carried too far. Its danger is that it can so easily become an excuse for not thinking. That is why the English, in particular, are not at their best when operating under any over-elaborate bureaucracy, because, more than most people, they are apt to avoid the trouble of thinking if they can find any excuse for doing so. This is not because they are bad at thinking; when they apply themselves to it, being a cool-tempered people and comparatively free from the more turbulent passions, their thought is usually just and balanced. They are seldom great philosophers but in the realm of practical thinking they have had, historically speaking, few equals. That was why, in the 17th, 18th and 19th centuries, they made so great a contribution to the arts of industrial, scientific, and agricultural production, as well as to those of government. Yet provide anyone to do their thinking for them and the English will cheerfully relapse into a state of mental Nirvana. A large number of their country gentry—till then one of the most intelligent ruling castes the world has seen—did so a century or more ago when, as a result of the Industrial Revolution and their predecessors' good sense, they found that they could afford to delegate their thinking on business matters to professional lawyers and agents and, most unfortunately for their descendants, did so. Later, following our immense industrial success in the 19th century, many of our commercial leaders and a large majority of our voters discovered the same easy way out. Gigantic combines, almost as extravagantly staffed as Government Departments, superseded the old hard-thinking one-man or family business of the past, while since the Fabian panacea, nationalisation, was adopted by the electorate and, to a lesser or greater degree, by all political Parties, decision in almost every calling has been increasingly left to the rule-of-thumb edicts and regulations of an enormous and ever-growing bureaucracy whose cost both impoverishes the taxpayer and enforces perpetual inflation. Instead of common or horse-sense—the virtue for which old John Bull was so famous in the markets and chancelleries of the world—we have seen the Gilbertian contradictions and paradoxes of a blinkered Civil Service administration so admirably set out in that perceptive and delightful book, "Parkinson's Law," and of which the reading of the daily Press provides new instances every day. Thus one week we learn that our Agricultural Authorities have insisted on destroying the rabbits on a rural estate at the fantastic cost to its owner of 15s. a rabbit, yet in the following week we read that the same Authorities, in order to encourage rabbit-keeping, have issued a new edition of an official bulletin on this practice explaining in simple terms how to feed and breed these domestic pets and agricultural pests in captivity, regardless of the fact that a proportion of them are quite certain to escape and reproduce their species in our fields and woods. The same Agricultural Authorities who have now acquired dictatorial powers to compel landowners and farmers, regardless of cost, to employ trappers to exterminate *all* rabbits on their land—a thing no professional trapper who values his future livelihood is ever likely to do!—a few years ago,

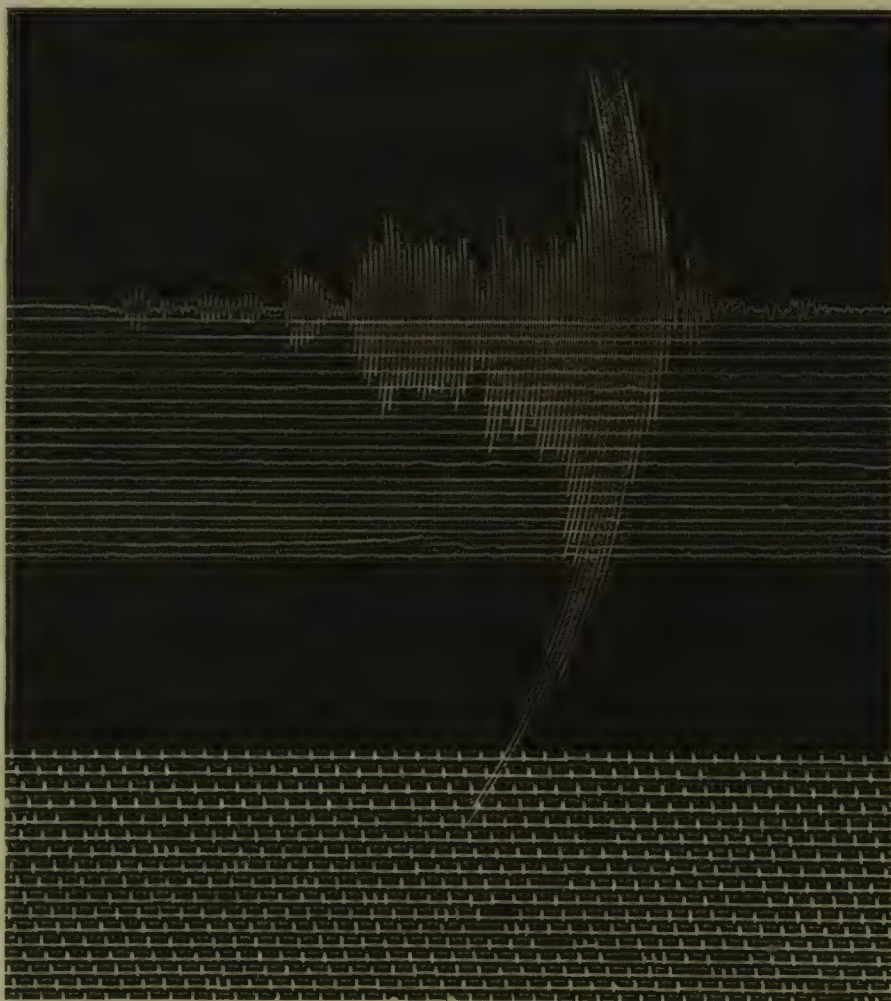
out of the most humane motives, made it a penal offence for anyone to spread myxomatosis.

In somewhat the same way, after being compelled twice in the course of a quarter of a century to fight a war to the death, involving a prodigious sacrifice of blood and treasure, to restrain a united Germany from violently over-running the territories of her neighbours and subjecting them to fire, rapine and slaughter, we have seen the phenomenon of many of those who lead us and form our political opinion being apparently prepared to risk, if necessary, a third World War—and one, moreover, in which, with our congested population, we would stand a strong chance of being obliterated by the atomic

spark comparable to the Polish corridor or the Sudeten problem in the 'thirties. Therefore, it has been contended, Germany's neighbours should join together to unite her, after which this particular problem would cease to exist and the peace of Europe and the world be that much more secure! Yet to anyone who thinks for himself instead of taking ready-made arguments out of separate pigeon-holes and repeating parrot-phrases in their support, so long as Germany remains disunited there is at present only one real danger to the peace of the world: the desire of Russia's Communist rulers to enforce their creed and empire on other countries by every, or almost every, means in their power. This is a very real

danger, yet it is perfectly clear that there is one step that they are not prepared to take in pursuit of their aims and that is the reunification of a free and, therefore, independent Germany. They are only prepared to see Germany reunited as a Communist puppet of Russia, ruled by Moscow-trained "quislings" and constrained by Russian arms and armies. It is not even certain that, given a free hand, they would opt for that. For having twice suffered in little more than twenty years a German invasion of their land, the Russians, people and rulers alike, are clearly determined not to give the Germans a chance of invading them again. And when one thinks what the Germans did when they invaded Russia, who can wonder at it? Though, therefore, many other possible causes of war between the Russians and the West may, and almost certainly will, persist whatever happens about Germany, there seems little danger whatever, so long as the Russians remain in their present frame of mind, of the U.S.S.R. precipitating a war merely to unite Germany. For the statesmen of the West and, above all, of this country, who profoundly desire peace, to reject any hope of a settlement with Russia unless the latter agrees to reunite Germany would seem, therefore, to be a negation both of self-interest and common sense. Admittedly, it is hard to set much store on any settlement Russia is at present likely to offer, for unless her rulers profoundly change both their practices and their philosophy they will only be bound by it so long as they consider it suits them to be so.

But at the moment they seem to want some kind of a settlement—apparently because they believe and fear that unless they can negotiate one they will shortly, owing to the reascent forces of the German nationalism, be presented with the alternatives of either a united Germany or war. And if we are not either to betray our trust over Berlin, which would be unthinkable, or drift into a war to re-establish a united Germany, a settlement of some kind will sooner or later have to be made. For though I do not think the Russians at present want war—if they did, it would have come already—everything points to the fact that they would prefer a war with the West while Germany remains disunited than accept a reunification of Germany which they believe, and I suspect rightly, must sooner or later lead to another war, precipitated by that Germany, and in which they would once more have to endure the attack of a united Reich armed with atomic weapons. Whatever else they can be blamed for, they can hardly be blamed for regarding that as, for them, the worst of all evils.



RECORDING A VIOLENT EARTHQUAKE THOUSANDS OF MILES AWAY: THE SEISMOGRAPH AT THE SCIENCE MUSEUM, LONDON, SHOWED THIS CHART.

Each "nick" along the lines at the top of this chart represents one minute of a disastrous earthquake, probably connected with the one that shook the north-west part of the United States late on August 17. The biggest swing on the seismograph was 15 ins. from peak to peak, a most unusual recording. Although the earthquake seems to have been most severe in Montana, an official of the Science Museum thought that the centre of the one recorded was probably on the bed of the Pacific. Other earthquake photographs appear on page 124.

weapons—in order to make sure that there shall be no perpetuation of the one positive political blessing that arose from the last World War, the division of Germany into two artificially but most effectively opposed halves, one of them democratic and capitalist and the other authoritarian and Communist. Of course, there are arguments—viewed in isolation, strong and admirable arguments—for reuniting Germany. Our allies, the West Germans, want it; it is natural and inevitable that they should do so. The politicians of the United States, which has a large German element in its electorate, also want it or at least feel bound to say they want it. For some incomprehensible and apparently mystical reason the present ruler of France also seems to want it, though I cannot believe that many of the French people do. There is, too, the argument that so long as Germany is disunited—which, until just before Sir Winston Churchill's timely birth, she had been for more than a thousand years—her continued disunity will provide a constant *casus belli* or powder-



A BIRTHDAY PORTRAIT IN A GARDEN: PRINCESS MARGARET, WHO WAS TWENTY-NINE ON AUGUST 21.

This charming study of Princess Margaret was taken in the garden of Royal Lodge, Windsor, for the occasion of her twenty-ninth birthday. The Princess celebrated her birthday in a family gathering at Balmoral on August 21, where she went to stay on August 13. Queen Elizabeth the Queen Mother, who had been staying at her home in Caithness, the Castle of Mey, also came to Balmoral for the occasion. Princess Margaret attended a picnic lunch on her birthday and later a small dinner party. She was given her presents at the breakfast table and bouquets of flowers were delivered to the Castle in

the morning. Of the events in which the Princess took part in the course of this year the most notable has been her visit to Portugal, which lasted from June 6 to June 12. Although the visit was semi-official the Princess had many engagements which included an appearance at the British Trade Fair at Lisbon. She was greeted with great acclamation by the Portuguese as had been her sister, the Queen, on her State visit in 1957. Princess Margaret also paid a visit to the Channel Islands at the end of June. She has spent the summer since at Sandringham, Royal Lodge and Balmoral.

Portrait study by Antony Armstrong Jones.



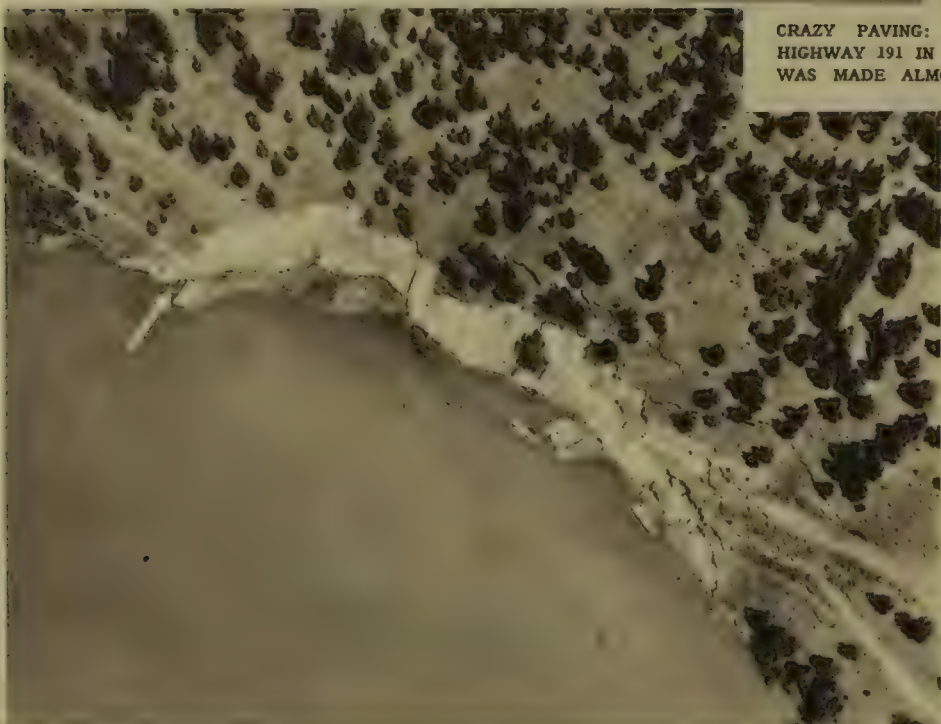
STILL HOLDING BUT IN SOME DANGER OF COLLAPSING: THE HEBGEN DAM ACROSS THE MADISON RIVER IN MONTANA, U.S.A., SEVERELY DAMAGED IN THE EARTHQUAKE.



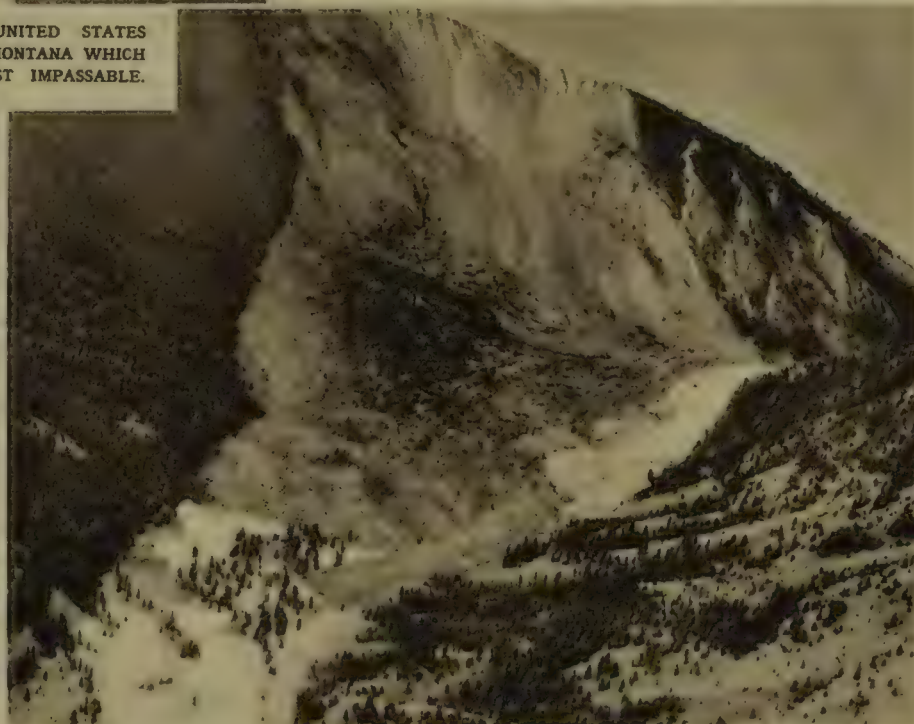
CRAZY PAVING: UNITED STATES HIGHWAY 191 IN MONTANA WHICH WAS MADE ALMOST IMPASSABLE.



THIS, TOO, WAS A ROAD, UNTIL THE VIOLENT EARTHQUAKE STRUCK THE NORTH-WEST AREAS OF THE UNITED STATES ON AUGUST 17. ELSEWHERE MOTORISTS WERE CUT OFF.



WHERE THERE WAS ONCE A HIGHWAY IN SOUTHERN MONTANA: NOW A HUGE BITE OUT OF THE CLIFFS. A ROWING-BOAT (ARROWED) INDICATES THE SIZE.



BLOCKING MADISON CANYON WITH TONS OF FALLEN ROCK: A HUGE LANDSLIDE THAT LEFT A SCAR ON THE MOUNTAINSIDE AND BURIED SEVERAL CAMPERS.



INJURED IN THE EARTHQUAKE AND AWAITING AIR TRANSPORT TO HOSPITAL: CAMPERS LIE ON BALES OF STRAW AT WEST YELLOWSTONE, MONTANA.



CRUSHED UNDER A TORRENT OF FALLING ROCKS IN MADISON VALLEY: A CAR WHICH WAS PARKED AT A CAMP SITE OCCUPIED BY A MARRIED COUPLE AND FOUR CHILDREN.

VIOLENCE IN MONTANA, U.S.A.: A DISASTROUS EARTHQUAKE WHICH CRACKED A DAM AND SHATTERED A MOUNTAIN.

A whole series of violent earthquake shocks caused widespread and severe damage in many parts of north-west United States on August 17. Minor tremors continued to shake that part of the country for several days. It has been reported that the epicentre of the earthquake was the south-west area of Montana, near Yellowstone National Park. Floods, landslides and road subsidences caused a number of deaths, while some motorists were stranded on mountainous roads as falling rocks blocked or swept away the

road on either side of them. One of the most dangerous victims of the earthquake was the Hebgen Dam across the Madison River, which was at first thought to be in imminent danger of giving way. Built at 6000 ft., it supports a reservoir 35 miles long which has itself been "tipped askew" by the disturbance. A few miles below it a mountain collapsed into the Madison River, while further down still, several towns were partially evacuated in case the dam burst. A seismograph reading is illustrated on page 122.

TWO THRILLING TATTOOS: AT EDINBURGH AND THE WHITE CITY.



THE SPECTACULAR SCENE OF THE MILITARY TATTOO REHEARSAL ON CASTLE ESPLANADE: NOW A TRADITIONAL FEATURE OF THE EDINBURGH FESTIVAL.



AT THE S.S.A.F.A. SEARCHLIGHT TATTOO AT THE WHITE CITY STADIUM: ARMoured CARS AND INFANTRYMEN GIVE COVER TO A BRIDGE-LAYING TANK.

It is now traditional for the Edinburgh Festival each year to enjoy the splendour of a military Tattoo on the Esplanade underneath the walls of the Castle. In the rehearsal of this year's Tattoo, which is shown above, can be seen the French Army's colourful Algerian Spahis mounted on Arab stallions. The Tattoo is under the direction of Scottish Command and includes the massed pipes and drums of Scottish regiments, military bands and Highland dancing. The Festival opened on August 23. The realistic

battle scene comes from the eighth Searchlight Tattoo in aid of the Soldiers', Sailors' and Airmen's Families Association which was held at the White City Stadium from August 17 to the 28th. This was a Service display of activity and skill in which there were performances by massed bands as well as the band of the United States Third Air Force. It ended with a battle in which R.E. sappers helped infantry and vehicles to cross a stream by means of a bridge-laying tank.

TO many observers of the South African scene it has appeared that violence of some sort was purely a matter of time. They were convinced that it would come sooner or later, though they could not foresee what would be the immediate cause or what form it would take. The policy of the Government of the Union of South Africa, far from adapting itself to changing conditions or providing cushions against the shocks latent in the new aspirations and spirit of the Bantu peoples, appeared to them to have become more rigid. These views were supported by many public statements and by action on the part of the Government, though it may prove that, from the long-term point of view, it is better aware of the arguments for elasticity than the observers have supposed.

In point of fact, what has happened in Natal up to the time of writing is not quite as serious as it might have been. The rioting has been a protest against economic conditions. It has also revealed that the part played by women in earlier and lesser disturbances was highly significant. The defiance of the police in mid-August came wholly from women. It was they who built a barricade of stones at Port Shepstone to block police traffic; they who armed themselves with sticks; more remarkable still, it was they who sallied into the cane-fields and attacked African labourers there to induce them to strike for wages of £1 a day. Higher wages, abolition of the control of movement into urban areas, and reduction of the recently raised poll tax have been the chief demands.

Nevertheless, it would be unwise to put the significance of what has happened too low. On August 18 local members of Parliament sent in, through the leader of the United Party in Natal, Mr. Mitchell, a complaint that police forces were inadequate to deal with the trouble. They also proclaimed that if fire-arms were used in self-defence the responsibility would fall upon the Government. Meanwhile, police action would seem to have been vigorous, despite the alleged shortage of numbers. At Umzinto Magistrate's Court 118 Amazons were fined £10 each or two months for trespass. Later on, 75 were fined £25 apiece or three months for blocking a road and holding up a bus. None of these fines were paid.

Moreover, though wages, taxation, and opposition to restriction of movement—also an economic factor—stand in the foreground, one feels certain that the question of racial segregation must lie in the background. The Bantu leaders believe that the two are linked and that segregation means low wages. There has been, it is true, an improvement in wages, but little in the opportunities accorded. The native Africans feel that they have the right to look forward to better jobs on merit. Guardedly and to a limited extent, a number of the United Party are evidently of the opinion that there is something to be said for these sentiments. Dr. Steytler, formerly party leader in Cape Province, has left the United Party and has been followed by about ten members. This is a

A WINDOW ON THE WORLD.

GRAVE TROUBLE IN NATAL.

By CYRIL FALLS,

Sometime Chichele Professor of the History of War, Oxford.

setback to the Leader of the Opposition, Sir de Villiers Graaf, but he has avoided any contentious retort.

To some extent the policy of the Government has been misunderstood in this country. If so, the cause is literal acceptance of its statements, so that it has really no reason for complaint. It is not the case that the Government is determined to maintain the *status quo* or believes such a course to be possible. The Prime Minister and his colleagues recognise that changes must come, and relatively fast. They are, however, convinced that if they were to come at the pace of West Africa the results would be chaotic and disastrous. They feel that if they keep the brake on for a period of five or six years there is a good chance that these misfortunes will be at least partly avoided.

and may even end in disaster. The policy of *apartheid*, as at present interpreted, is unpromising, even as a temporary expedient. For one thing, it appears bound to place the country in a position of spiritual isolation—not the worst that can happen, but a calamity none the less.

The pace has been too fast elsewhere in Africa. We are witnessing an upheaval. Many aspects of it are deeply to be regretted. It is causing anxiety to Britain, the most progressive of the colonial Powers of the world. If the South African Government reproaches us with creating difficulties and embarrassment for it, we can fairly retort that its course of action is a threat to our own programme. Nor is it wholly a problem of the continent of Africa. In a sense it extends to the Caribbean and "the deep South" of the United States. Little Rock is linked with Durban. Cape Province cannot be divorced from Trinidad. If there is a throb in Kenya, it is felt in Ghana, too.

The situation in the Belgian Congo shows that a paternal rule of a type more benign than that

of South Africa does not suffice to allay unrest. The background is utterly different, because climatically South Africa is "a white man's country" in a sense that the Congo can never be, and the white community is not only far larger but also deeply rooted in the soil. The Belgian Government has wisely recognised that change is inevitable, and this fact in itself has made its prospects more hopeful and raised its reputation for statesmanship. There is, however, small likelihood that the South African Government will realise this fact. It is more likely to reproach Belgium. Its political strength cannot be doubted. The defections from the United Party, with

provincial elections little over six weeks ahead, can only weaken the Opposition.

I belong to a generation which can hardly expect to witness the outcome of the great revolution now taking place throughout Africa. What I can see now is that it is bound to be radical and to lead to a wholly different political and economic situation. What is, and must be, impenetrable to my vision is the manner in which this will come about. There is, however, nothing bold in my prophecy that the nature of the throes will depend to a considerable extent on the wisdom and skill of peoples of European blood. To foresee that their own future in Africa will also be conditioned by these qualities is yet easier. Their responsibilities to their children are great.

MIDLAND BANK.

We would like to draw attention to the fact that in order to avoid disappointing our many readers who have been collecting their advertisements, the Midland Bank have agreed to maintain the continuity of this series by publishing their July and August copy missed during the Printing Dispute. The advertisement appearing in this issue, therefore, is for the month of July and the August copy will appear in the first issue of September.



AFRICAN WOMEN RIOTING IN NATAL: THE SCENE OF MORE THAN 1500 WOMEN BRANDISHING STICKS AND PROTESTING AGAINST AN INCREASED POLL TAX. THERE ARE DEMANDS FOR A LARGER POLICE FORCE TO SETTLE DISORDER.

This picture shows something of the violence that has been aroused in the African women of Natal by an increase in the poll tax. Since August 16 more than a thousand of them have been gaoled for breaches of the peace and the prisons are overcrowded. Sugar cane fields have been destroyed and police and officials threatened with violence. White farmers are planning "vigilance committees" to guard their farms. The women complain of the poll tax, restrictions on their movements and of low sugar work wages.

Such is my impression, and I know that it is held by others who have better sources of information. The Government's attitude is not ignoble. Pleas heard in Britain that South Africa should be "hit where it hurts" by various forms of boycott are as dangerous as they are unprincipled. One of the silliest is also one of the most uncharitable. It is that this country should cease to play cricket, Rugby football, and hockey with South African teams. There is fortunately no sign that any attention is being paid to this proposal. Those who advocate such schemes are more likely to cause senseless bloodshed than to further the programme which they desire to see.

Yet when all is said, when we have taken into account all the responsibilities felt by the Government for the large and long-established white community in South Africa, if we refuse to accept all the accusations of injustice levelled against it, most of us will conclude that it is mistaken. The policy of braking would have a good deal to recommend it if it were likely to bring about the results for which it has been undertaken. This seems unlikely. The detached observer will more probably decide that it will lead to new difficulties

A WINDOW ON THE WORLD—I.



BOMBAY, INDIA. IN PROTEST AGAINST THE IRREGULAR RUNNING OF SUBURBAN TRAINS: HUNDREDS OF ANGRY PASSENGERS BLOCKING THE RAILWAY LINES. Main-line trains were held up for eight hours at Bombay recently when local passengers at Malad Station demonstrated against the irregular suburban service by swarming on to the track and resisting efforts by the police to remove them.



BETHLEHEM, JORDAN. ON HIS FORMAL VISIT TO THE TOWN WHICH IS CHRIST'S BIRTH-PLACE: KING HUSSEIN OF JORDAN SPEAKS TO CHEERING CROWDS IN MANGER SQUARE. In Bethlehem during his four-day tour of the Jerusalem district, King Hussein of Jordan was given a rousing welcome when he spoke to crowds from a balcony on August 18. While in Jerusalem itself the King was received by both Moslem and Christian notabilities.



NEW JERSEY, U.S.A. LOOKING LIKE A NEWLY-HATCHED EGG: PART OF A PROTOTYPE OF A FIFTEEN-STORY DOME BEING BUILT IN MOORESTOWN. DOMES LIKE THIS ONE, 140 FT. IN DIAMETER, WILL BE USED IN THE ARCTIC AS PART OF THE BALLISTIC MISSILE EARLY-WARNING SYSTEM.



NEW MEXICO, U.S.A. STRUCK BY AN UNFORTUNATE PERCHING BIRD WHILE TRAVELLING AT AN ENORMOUS SPEED: THIS AIR FORCE STEEL ROCKET SLEDGE SHOWED THIS INFLECTED DAMAGE ON ITS SNUOT.



HAWAII. THE GOVERNOR OF AMERICA'S NEWEST STATE POINTS TO THE NEW SEAL.



LAOS. EVIDENCE OF FURTHER TROUBLE IN THE FAR EAST: LAOTIAN REBELS BEING ESCORTED SOUTH AFTER THEIR CAPTURE DURING A SKIRMISH IN THE NORTH. It has been estimated that about 8000 rebel troops are involved in the outbreaks in northern Laos. Laos borders on Communist North Viet Nam, and it is believed that the Communist rebels are trying to isolate and seize two northern provinces.



WASHINGTON, D.C., U.S.A. A NEW FLAG FOR THE UNITED STATES, AND HAWAII BECOMES THE FIFTIETH STAR: PRESIDENT EISENHOWER AT THE WHITE HOUSE. On August 21 President Eisenhower proclaimed Hawaii the 50th State of the Union. At the same time a new flag has been approved, with 50 stars arranged in nine rows of six and five stars alternately. Hawaiian members of Congress were later sworn in.

A WINDOW ON THE WORLD—II.



HOLLAND. A PLAN TO BAR THE NORTH SEA FROM THE CHANNELS BETWEEN ROTTERDAM AND ANTWERP: THE MAN-MADE ISLAND IN THE HARINGVLIET CHANNEL. This great project, now being carried out by Dutch engineers and expected to be completed by 1968, will provide seventeen locks across the Haringvliet. The artificial island was built to aid the construction of the locks, which will be linked to the shores by a dam.



STOCKHOLM, SWEDEN. THE INITIAL ATTEMPTS TO RAISE A 300-YEAR-OLD SWEDISH WARSHIP, *VASA*: THE TWO PONTOONS ARE USED TO LIFT THE SHIP FROM THICK MUD. On August 20 *Vasa*, which sank in 1628, was raised from the bottom to be towed—still submerged—into shallower waters. Many interesting objects have already been recovered (illustrated in our issues of March 7 and August 22). The ship is to be placed on permanent exhibition.



NEW YORK. SEEN FROM THE ROCKEFELLER CENTRE: AN AMAZING VIEW OF THE CITY DURING THE POWER FAILURE WHICH BLACKED OUT AN AREA OF ALMOST FIVE MILES. On August 17 large areas of New York City, including most of Upper Manhattan, were plunged into darkness when cables, overloaded by heavy use during a heatwave, broke down. The black-out lasted thirteen hours, rendering useless lifts, refrigerators and traffic lights.



VENICE, ITALY. A PRESENT FOR COPENHAGEN: A GONDOLA, TO BE TAKEN BY TRAIN TO THE DANISH CAPITAL, WITH GONDOLIER AND GUITAR-PLAYER. For the celebration of the fiftieth anniversary of the Danish Press, Venice, city of canals and gondolas, is sending this gondola—by train—to the port of Copenhagen, complete with a gondolier, Ferruccio Morucchio, and a guitarist, Umberto Da Preda.



BONN, WEST GERMANY. SHOWN RECENTLY: NEW TYPES OF DRESS FOR THE WEST GERMAN ARMY, SIMILAR TO THOSE WORN BY BRITISH SOLDIERS. The new West German Army battledress (seen on the left) and tank suit strongly resemble their counterparts in the British Army. Instead of gaiters, more practical small jackboots are worn. A lightweight duffel coat with detachable quilted lining can be worn over the green-brown battledress.



SYDNEY, AUSTRALIA. AN ORIGINAL SOLUTION TO PARKING PROBLEMS: CARS PACKED IN TIERS IN A PARKING STATION.

Sydney, which has already had restricted areas and parking meters for some time, has now gone on to settle her parking problems by building this unusual parking station at Kent Street. The cars are stacked up in tiers above one another and give the impression of a Columbian necropolis rather than a car park.



HEIDELBERG, WEST GERMANY. A GIANT PUSH-CHAIR HOLDING 14: INVENTED TO SAFEGUARD YOUNG CHILDREN FROM TRAFFIC BY NURSES OF A KINDERGARTEN.

The nurses of a kindergarten in Heidelberg produced an answer to the difficulties in protecting their charges from the dangers of traffic by inventing this enormous and capacious push-chair. It holds a maximum capacity of fourteen children.

A WINDOW ON THE WORLD—III.



PORT ARTHUR, CANADA. THE LARGEST GRAIN CARRIER ON THE GREAT LAKES, SEAWAY QUEEN OF TORONTO: SHE IS TAKING IN 725,000 BUSHEL OF WHEAT.



MONACO. PRINCE RAINIER'S NEW YACHT *DEO JUVANTE III* SEEN AT REST IN THE HARBOUR OF MONACO, WITH THE TOWN AND HILLS RISING UP BEHIND. BEFORE IT CAME INTO HIS POSSESSION IT WAS THE *COSTA DEL SOL* FROM SEVILLE.



Seaway Queen of Toronto, which is seen in the act of loading (above), can be loaded in about ten minutes with a cargo of 725,000 bushels of wheat. Her cargo can then be taken down to Montreal through the Great Lakes in less than five days. It is one evidence of the benefits of the St. Lawrence Seaway.

(Right.) MONTE CARLO. SIR WINSTON CHURCHILL IN CONVERSATION WITH MME. MARIA CALLAS, THE FAMOUS OPERATIC SINGER, WHO WAS ALSO ONE OF MR. ONASSIS' GUESTS.

Sir Winston Churchill and Mme. Maria Meneghini Callas were fellow guests on Mr. Aristotle Onassis' yacht *Cristina* on a recent three-week cruise of the Eastern Mediterranean. They are seen here in conversation. Lady Churchill returned to London on August 20 in order to undergo a minor eye operation. Sir Winston is staying on in France.



MONTE CARLO. SIR WINSTON CHURCHILL DISEMBARKING FROM THE YACHT OF HIS HOST, MR. ONASSIS (LEFT), ON AUGUST 13.



ROME, ITALY. THE SUNLIT SIMPLICITY OF THE NEW OLYMPIC STADIUM AT THE FOOT OF MONTE MARIO: IT HAS BEEN BUILT FOR THE 1960 OLYMPIC GAMES.

All the swimming events of the 1960 Olympic Games will be held in this admirable swimming stadium which is built on the northern outskirts of Rome at the foot of Monte Mario. For the Olympic Games, which are being held there next year, it will be able to seat up to 20,000.



SYDNEY, AUSTRALIA. THE SYDNEY HARBOUR BRIDGE, THE FAMOUS LANDMARK SINCE THE CONSTRUCTION OF TWO NEW TRAFFIC LINES: SHOWING THE BRIDGE FROM THE NORTH SIDE. One of the best-known landmarks of Australia, the Sydney Harbour Bridge has recently, by the removal of two tram tracks, had its number of road traffic lines brought up to eight. It also carries two railway tracks. These new roadways are restricted to traffic entering from the north.



DISCOVERED IN A SEWER AT PIRÆUS: REMARKABLE WORKS OF ART

ON July 18 and 25 some remarkable and exciting discoveries were made at Piræus, the ancient port of Athens, when repairs were being carried out on the city's sewerage system. Indeed, in the opinion of Dr. Papadimitriou, the expert on Greek antiquities, the two bronze statues which were discovered can be said to equal in beauty some of the greatest works of Ancient Greece. On July 18 a bronze *kouros*, dating from about 500 B.C., was [Continued below.



(Above, left.)
THE NOBLE HEAD OF THE BRONZE
STATUE OF ARTEMIS. THE HAIR
IS ARRANGED SO THAT THE EARS
ARE UNCOVERED.

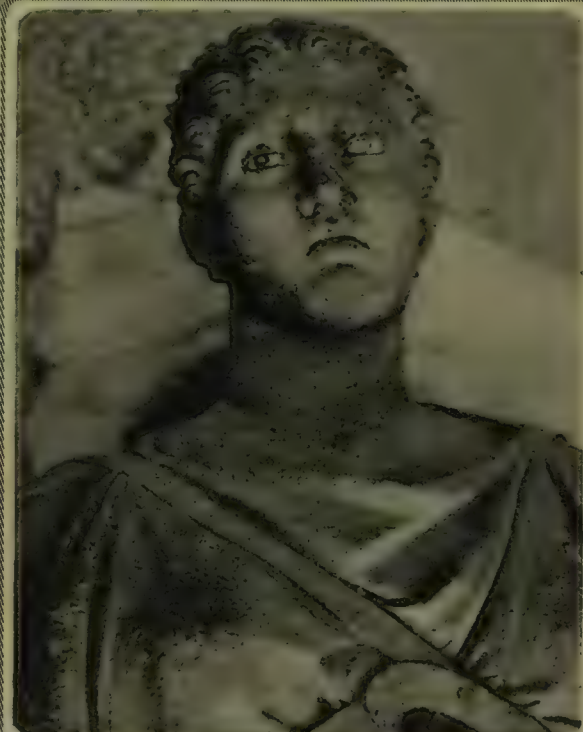
(Right.)
THE BRONZE STATUE OF THE
GODDESS ARTEMIS, SHOWING THE
BEAUTIFULLY - DRAPED ROBE
WITH BELT AND CROSS STRAP.



A MARBLE HERMAIC COLUMN, 1.43 METRES TALL, JUST AFTER ITS
DISCOVERY: PROBABLY THE WORK OF ALCAMENIS.



THE BEAUTIFUL HEAD OF THE FULL-LENGTH STATUE
OF A KORI: PROBABLY OF THE 4TH CENTURY B.C.
THE HAIR IS MADE INTO "CORDS."



THE FACE OF THE FULL-LENGTH KORI. THE EYES ARE OF
TWO KINDS OF PRECIOUS STONE. THIS WAS ONE OF THE
MOST OUTSTANDING FINDS.



Continued.] found in perfect condition, slightly larger than life-size and possibly to be reckoned a masterpiece of Greek classical sculpture. A workman, using a pneumatic drill to open up a drain in order to replace a pipe, encountered a hard object which stubbornly resisted all attempts to drill through it. The workman was obliged to stop his work; he then dug lightly into the earth. To his astonishment he found some large statues buried in it. Work on the repairs was immediately stopped and systematic archaeological excavations subsequently carried out. A *Herm*, or marble [Continued above, right.

(Left.)
THE BRONZE STATUE OF A KOUROS, 1.92 METRES TALL:
SUPPOSED TO REPRESENT THE GOD APOLLO. IT IS
ONE OF THE FINEST EVER DISCOVERED, PROBABLY
OF THE 6TH CENTURY B.C.

(Right.)
A BRONZE MASK, 0.45 METRES TALL, REPRESENTING A
BEARDED MAN WITH TRAGIC EXPRESSION, PROBABLY
USED TO DECORATE A STAGE IN AN ANCIENT GREEK
THEATRE.





Continued.] column topped by the bearded head of Hermes, both of whose eyes, which were most likely semi-precious stones, were missing, was unearthed. The same day a wonderful bronze statue of the Goddess Athena, of about the middle of the 4th century B.C., was found. The goddess is wearing a beautifully-draped full-length robe. The excavations continued to be carried out under the supervision of the distinguished archaeologist, M. Kastiocosta, and some time afterwards other statues were discovered, including finds as interesting as the earlier ones. Among these was a bronze statue of the Goddess Artemis, with quiver and belt, and a bronze mask representing a bearded man with a tragic expression and probably used to decorate the stage of an ancient theatre. The theory has been [*Continued below.*



(Above, right.)
A CLOSER VIEW OF THE STATUE OF ATHENA, WITH ITS HELMET DECORATED WITH OWLS, A BIRD-LION AND A SNAKE.

(Left.)
THE BRONZE STATUE OF THE GODDESS ATHENA, 2.3 METRES TALL, WITH HELMET; AND THE STATUE OF ARTEMIS.



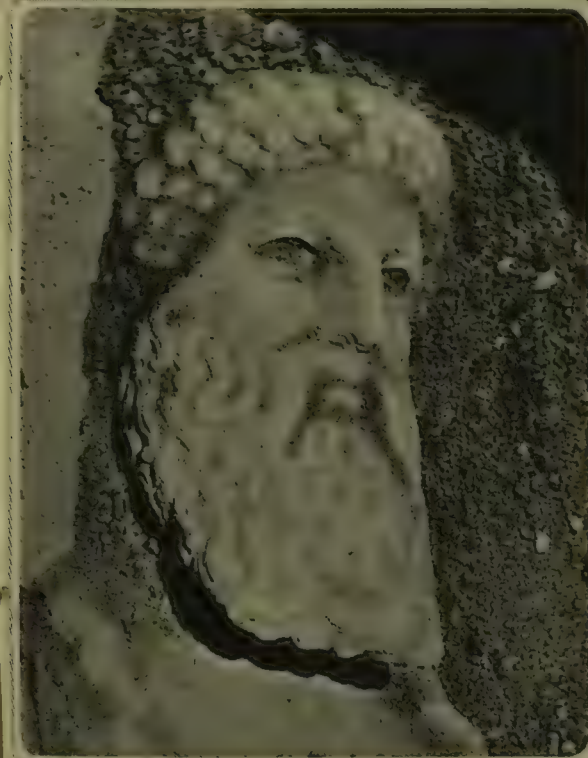
A FRONT VIEW OF THE HEAD OF THE BRONZE STATUE OF THE GODDESS ARTEMIS, SHOWING THE HIGH-SWEPT STYLE OF THE HAIR.



THE UPPER PART OF THE STATUE OF A KOUROS. PROBABLY THE WORK OF ANTINOR; 6TH CENTURY B.C.



THE BEAUTIFUL BRONZE STATUE OF A KORI, OF THE HELLENISTIC PERIOD, DISCOVERED IN THE EXCAVATIONS AT PIRÆUS.



Continued.] put forward by Dr. Papadimitriou that the statues had been gathered together and stored in the Port of Piræus to be subsequently sent to Rome to adorn the patrician palaces there. It is possible that the storehouse collapsed as the result of fire, and thus these amazing treasures were concealed until their chance discovery many centuries later. Greek archaeologists consider that Sulla, returning from Ephesus through Athens in 84 B.C. was responsible for assembling them.

(Left.)
THE BEARDED HEAD OF A HERMAIC MARBLE COLUMN. THE EYES—WHICH WERE MOST LIKELY SEMI-PRECIOUS STONES—ARE MISSING.

(Right.)
A STRANGE JUXTAPOSITION: THE BRONZE STATUE OF THE GODDESS ARTEMIS WITH HER QUIVER, LYING NEXT TO THE GODDESS ATHENA.

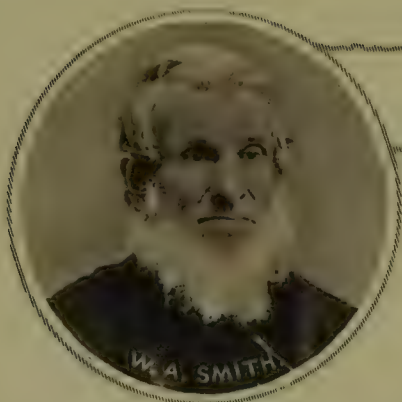




THE HAPPY RETURN: A DRAMATIC AIR VIEW OF U.S.S. *RANGER* BEARING A HUMAN MESSAGE.

This brilliant scene shows U.S.S. *Ranger*, one of the largest attack aircraft-carriers in the world, as she sails through San Francisco Bay after seven months' duty in deployment in the Western Pacific. She is the only one of her class, the "Forrestal," in the Pacific. Her enormous flight deck on which can be seen a formation of some of her crew in the words "Power for Peace," is able to handle any carrier-borne aircraft now in the fleet or on the drawing boards. Also she is capable of launching and retrieving aircraft simultaneously.

After her arrival in San Francisco her commanding officer, Captain Noel Gayler, on August 7, accepted, for his officers and crew, the Admiral James H. Flatley Memorial Award for aviation safety, which is one of the U.S. Navy's highest aviation awards. This is the first time that the award has been made and *Ranger* won it in competition with all other U.S. Navy attack aircraft-carriers, because of her outstanding safety record during the past year, during which she had only six flight-deck accidents in 12,500 landings.



ONE HUNDRED YEARS OF OIL.

THE GREAT ACHIEVEMENT OF THE OIL INDUSTRY IN BRITAIN.

By C. M. VIGNOLES, C.B.E.,
President of the Institute of Petroleum.



ON August 27, 1859, Edwin L. Drake struck oil 69 ft. below ground at Titusville, Pennsylvania, with the first well drilled specifically for that purpose. The oil industry dates from that moment.

On Oil Centennial Day in the United States, August 27, nation-wide celebrations were focussed on Titusville. The first issue of a postage stamp commemorating the 100th birthday of the industry was on sale in the Titusville Post Office and Main Street School. A stainless-steel capsule filled with messages for the future was placed in the Drake Well Memorial Park and sealed until the year 2000. The second century of oil was heralded by speakers of national and international repute at a round-table conference. Testimonial messages from the Governors of America's thirty-three oil- and gas-producing States arrived at Titusville after a 1250-mile journey by crude oil pipeline from Corsicana, Texas. Oilmen have been drilling a new well near to the first one discovered by Drake 100 years ago, and operations were arranged so that oil would begin flowing from it three days before Centennial Day. Beginning with church services on Sunday, August 23, the week of the centenary at Titusville included exhibits of Oil Americana and, finally, a Grand Parade of Oil the purpose of which was to tell the story of oil.

It would be a startling experience for Drake if he could see to-day the uses to which the products of oil have been directed in the first 100 years. At first, petroleum products provided, in the main, kerosene for lamps with tall glass chimneys, and lubricating oil. Mankind was then only beginning to learn how to wield the component constituents in oil into the variety of products we know to-day. One of the exciting things about oil, of course, has been the progressive discovery through the years and, beginning with the internal combustion engine, of more and more uses for it. A job exists for every product. Synthetic textiles, plastics, insecticides and detergents, for example, have a petro-chemical base, and while one petroleum product may make its contribution in, say, the manufacture of town gas, another is used in paints and polishes. There is not enough space for anything like a shopper's list of petroleum uses. Cars, aeroplanes, diesel locomotives, agricultural tractors, paraffin heaters, open hearth steel furnaces, to name a few among many, use a variety of petroleum fuels, each of which is refined for its specific technical and economic requirements. Oil company scientists are always trying to make each petroleum product work harder.

More than two-fifths of the energy the world needs every day to run its industry and commercial undertakings, and also, to an increasing extent to keep homes warm, is provided by oil and natural gas. Since 1900, when world production was 20 million tons, one development after

another has depended on oil for its life, and by 1950 the output had risen to 550 million tons a year to satisfy demands for oil. To-day the level of oil production is more than 925 million tons a year. Seventeen per cent. of the United Kingdom's commercial energy is supplied by oil, and in the world market for petroleum products the British Isles, which ranks ninth among nations in population, occupies fourth place, after the United States, the U.S.S.R. and Canada.

The oil industry in Britain is the most extensive and up to date in Western Europe, and is due to an expansion and reorganisation of the refineries in England, Scotland and Wales which was set in motion a decade ago. The development re-touched the picture of the industry, and it emerged

events of every kind, had already embarked upon a great modernisation programme in this country. So far £300 million has been invested in home refinery development. Refineries were enlarged, and new ones were built. It was a huge undertaking, but the results of this policy were quickly apparent. By 1950 half of the petroleum products used here were the products of our own refineries, and a steadily increasing proportion of oil was coming to Britain in its crude state to feed the home refineries. By 1952 the home industry was able to meet practically all the home demand, although this itself had been rising all the time. Last year it was 29 million tons.

A considerable area is within economic reach of each of the United Kingdom refineries.

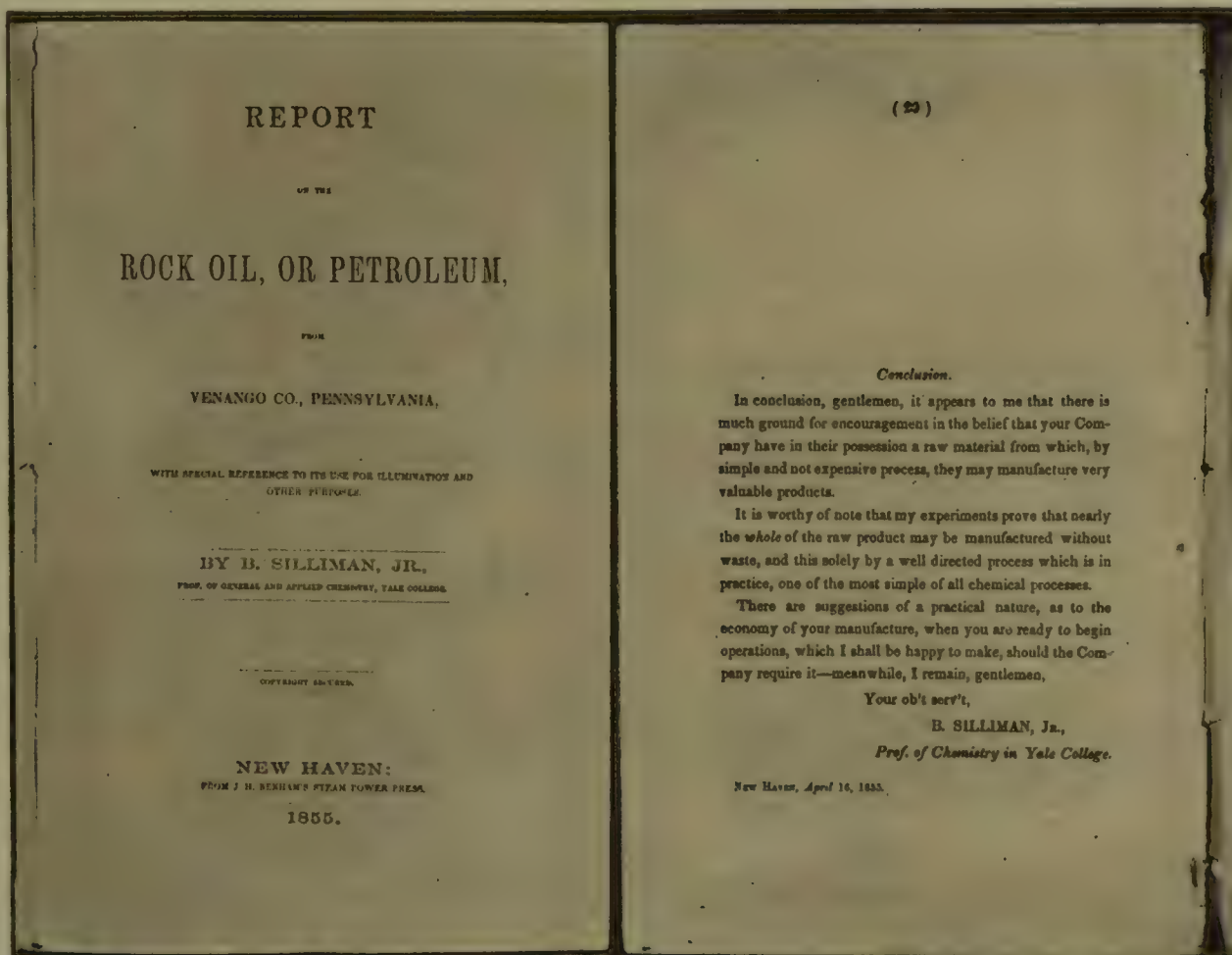
There are eight major refineries. British Petroleum has the Isle of Grain, Kent; Llandarcy, South Wales; Grangemouth, on the Firth of Forth; Esso Petroleum has Fawley, on the Solent; Mobil Oil has Coryton, Essex; and Shell International has Shell Haven, Essex; Stanlow, Cheshire; and Heysham, Lancashire. There are a number of smaller refineries. British Petroleum has one at Pumpherton, Midlothian, and Berry Wiggins has two, at Kingsnorth, Kent, and at Weaste, Lancashire. William Briggs' refinery is in Dundee, and Lobitos's is situated at Ellesmere Port, Cheshire. The Manchester Oil Refinery is at Trafford Park, and Shell has one at Ardrossan, Ayrshire.

Two highly successful developments are related to the establishment of the home refining industry. Chemical feedstock is flowing from certain refineries at an ever-increasing rate, and petro-

chemicals, which were little used on this side of the Atlantic in 1945, now provide 40 per cent. of the base chemicals in Europe. It is expected that all organic chemicals for starting synthesis will have a petro-chemical base by 1975. As the oil industry expands, so is the petro-chemical industry expanding.

Another aspect of the international operations of the oil companies who have their headquarters in London is their contributions to the invisible earnings in this country's balance of payments. The oil industry is also a good customer of industry. Oil tankers comprised one-third of the merchant shipping tonnage completed in United Kingdom shipyards last year. During the past five years the oil companies have bought £600 million of equipment in this country. The oil industry is an integral part of Britain's economy.

Industry in the United Kingdom is applying improved techniques at what, only a generation ago, would have been considered a rapid pace. Competition demands it. High standards of living and a continuing expansion of the country's economy is certain, and oil will give good service in this evolution in technology.



PREDICTIONS BY A PROFESSOR OF CHEMISTRY WHICH PROVED ENTIRELY TRUE AND WHICH LED TO THE GROWTH OF A VAST INDUSTRY: THE REPORT ON PETROLEUM PUBLISHED IN 1855 THAT PERHAPS CHANGED MAN'S LIFE AND HABITS AS MUCH AS ANY OTHER WORDS EVER WRITTEN. HITHERTO OIL HAD BEEN LIMITED TO USES SUCH AS LAMP-FUEL, A MEDICINE OF DOUBTFUL VALUE AND EVEN AS WAR PAINT TO DECORATE INDIAN BRAVES.

in much more vital but less complicated detail, an advantage to everyone in the highly competitive conditions of to-day.

In 1938 the total consumption of petroleum products in the United Kingdom was 9 million tons. Only a quarter of it came from home refineries. The remainder went through the refining process near the oilfields in the Middle East or in the Americas. Tankers brought these refined commodities to Britain already prepared for the market. An elaborate network of depots for their distribution in the United Kingdom was based on this form of supply. It was the best—in fact, the only—system for the times, but within ten years our economy had made such progress that a significant increase in our responsibilities as an industry in supplying oil to the nation naturally took place.

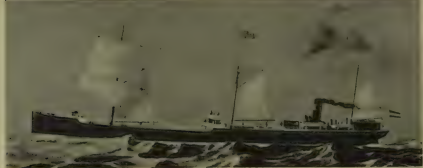
In 1948, when the Petroleum Board, in which the oil companies pooled their resources for the war, was nearing the end of its operations, the demand for oil and its products in the United Kingdom was over 50 per cent. higher than in 1938. This trend seemed likely to continue, and the oil industry, exercising the flexibility which has always enabled it to cope with exceptional

THE EARLY HISTORY OF OIL: AROUND OIL CREEK

SCENES OF PRODUCTION A CENTURY AGO.



(Above.)
A TYPICAL EARLY OIL TOWN IN 1865: SHAM-BURG, PENNSYLVANIA, WITH ITS MAIN STREET AND WOODEN BUILDINGS, NEAR OIL CREEK.



(Left.)
THE FIRST TANKER: GLÜCKAUF, WHICH WAS BUILT IN ENGLAND IN 1866, WHOSE DESIGN WITH THE FUNNEL AFT WAS THE PROTOTYPE FOR SUCCEEDING TANKERS.



OIL SPRINGS AT TARR FARM, OIL CREEK, THE LANDSCAPE OF



THE FIRST PROSPECTORS. (From our issue of November 8, 1862.)



PROSPECTORS FIGHTING TO GET INTO THE OIL CREEK RAILWAY IN 1865: OIL CAUSED RUSHES FOR WEALTH LIKE GOLD.



THE FIRST COMMERCIAL OIL WELL IN THE UNITED STATES: THE DRAKE WELL, WHICH FIRST FLOWED ON AUGUST 27, 1859. COL. DRAKE (FOREGROUND RIGHT) BEFORE HIS WELL WHILE BILLIE SMITH HIS DRILLER AWAITS (EXTREME RIGHT).



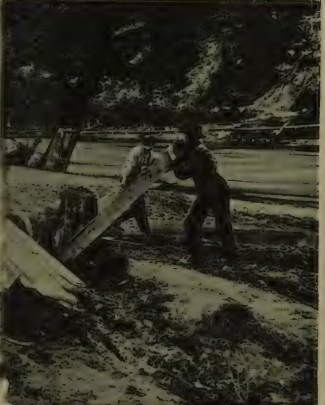
WOODEN TANK TRUCKS BEING LOADED IN 1865; THESE WERE



SUPERSEDED BY THE IRON BOILER TRUCK IN 1869.



A BAD ROAD IN OIL CREEK SHOWING THE DIFFICULTY OF



TRANSPORT UNTIL THE INTRODUCTION OF PIPELINES.



THE DEPOT OF THE OIL CREEK RAILWAY, TITUSVILLE, IN 1865: THE RAILWAY WAS VITAL FOR DISTRIBUTION OF OIL.



THE YALE PROFESSOR WHO FIRST ANALYSED PETROLEUM: BENJAMIN SILLIMAN, WHOSE DISCOVERY BEGAN THE STORY.

The first commercial oil well in the United States was drilled under the direction of Colonel Edwin Drake on August 27, 1859, and oil was found the next day by "Uncle" Billie Smith, at Titusville, Pennsylvania. With the increasing scarcity of whale oil and the difficulties in the extraction of vegetable oils,

there had already been a search for a new cheap illuminant. In 1855 a professor of chemistry at Yale, Benjamin Silliman, was employed by the two men, Bissell and Eveleth, who later employed Drake, to analyse the oil they had collected from seepages on their land in Pennsylvania. It was his discovery

that kerosene and other useful products could be extracted, which set them drilling. The first well, Drake Well as it was known, provoked a rush comparable to the American Gold Rushes and there was soon a thriving industry around Titusville. The Oil Creek Railway was started which helped distribution,

but they soon had to deal in terms of millions of barrels. Wooden tank railway trucks and pipelines came in 1862, refineries were built and the foundations of this vast industry were laid. The discovery of oil then led on to the great mechanical discoveries of air and travel.

WITH A DECK
THE SIZE OF A
PARADE-GROUND:
THE LARGEST EVER
BRITISH-BUILT
TANKER,
BRITISH QUEEN.

THE largest tanker ever built in Great Britain is due to be launched on September 16. One glance at the spacious deck of *British Queen* will give some idea of the vastness of this latest vessel to be built in the service of the oil industry. *British Queen* has a dead-weight of nearly 50,000 tons, and a gross tonnage of about 31,000 tons. On order for the BP Tanker Co., she has been constructed in the Clydebank yard of John Brown and Co. (Clydebank) Ltd., where the world-famous *Queen Elizabeth* and *Queen Mary* were built. Soon she will be at sea, rivaling in size all but the largest passenger ships. Her gross tonnage is not unnaturally a good deal less than that of the largest of these ships, the *Queen Elizabeth*, which is over 83,000 tons, but in length *British Queen* compares favourably—760 ft. as compared to 1031 ft. 90ft. wide, she can travel at a service speed (loaded) of about 15½ knots. Nor is she by any means merely a floating oil tank: one of the most attractive features of the ship—at least from the point of view of the officers and crew—is the special attention that has been paid to privacy and personal comfort. Single cabins are available for all except apprentices and boys, while a number of officers will have private bathrooms. Much of the ship is also air-conditioned, and a swimming-pool and recreation rooms are at the service of all personnel. There are thirty oil compartments, and oil can be pumped into them at the rate of 1250 tons per hour. Loading and discharging connections are clearly visible in this photograph, grouped in pairs. In addition, there are six water ballast compartments, and water can be pumped into them at the rate of 750 tons per hour. The ship has been nearly two years under construction.



SOME MODERN BRITISH OIL TANKERS: A VESSEL OF THE SHELL FLEET,

A NEW SHELL-MEX AND B.P. LTD. TANKER AND TWO ESSO SISTER SHIPS.



ONE OF THE LARGER VESSELS OF THE SHELL TANKER FLEET, CARRYING A CARGO OF ABOUT 31,000 TONS OF CRUDE OIL FOR DISTANT REFINERIES.

(1) Rudder; (2) manganese bronze propeller; (3) steering gear flat; (4) fresh and distilled water tanks; (5) boiler draught fan; (6) boilers (two); (7) propeller shaft; (8) secondary reduction gearing; (9) low-pressure turbine; (10) primary reduction gearing; (11) low-pressure turbine; (12) high-pressure turbine; (13) main condenser; (14) auxiliary cooling water pump; (15) turbo alternator with coupled main feed pump; (16) switchboard; (17) bilge pump; (18) oil fuel bunkers; (19) galley; (20) swimming-pool; (21) fan room intakes; (22) crew mess rooms; (23) crew accommodation; (24) engine room skylights; (25) engineer officers' accommodation; (26) engineer officers' accommodation; (27) cargo pump room entrance; (28) cofferdam leading off main cargo pump room; (29) structural arrangement wing cargo compartment; (30) fore and aft gangway; (31) structural arrangement centre cargo compartment; (32) cargo hatch; (33) oil hose and stores derrick; (34) oil cargo compartment; (35) loading and discharge pipelines; (36) radar mast and scanner; (37) radio office and radar room; (38) navigating bridge; (39) Captain's accommodation; (40) navigating officers' accommodation; (41) store rooms; (42) entrance to forward pump room; (43) cofferdam; (44) forehold; (45) fore deep tank (used for bunkers).



B.P. HAULIER: THE FIRST OF A FLEET OF NINE TANKERS BUILT BY SHELL-MEX AND B.P. LTD. NOW USED IN BRITISH ESTUARIES. TO MAKE NAVIGATION EASIER

(1) Voith-Schneider propelling unit; (2) shaft; (3) twin propeller guards; (4) skeg; (5) 270-h.p. propelling unit; (6) auxiliary machinery; (7) oil bunker space; (8) rubbing strakes; (9) cofferdam; (10) cargo pump room; (11) cargo pipelines; (12) tank hatch; (13) collapsible wheelhouse;

THE importance of oil tankers is shown by the fact that they comprise a quarter of all merchant ship tonnage in the world. Oil is now the most important commodity in international trade, both in value and in volume. Here we show three types of British tankers. An oil tanker is always recognizable by the position of its funnel which is placed aft, by its lack of heavy loading equipment and by the footbridge, which often connects the fore and aft parts of the ship. For safety the fore and after parts are separated by a wide gap

(14) trunk deck; (15) centreline bulkhead; (16) hinged mast in tabernacle; (17) hatch to store; (18) No. 1 spirit tank; (19) dry wing compartment; (20) No. 2 spirit tank; (21) spirit-tight bulkhead; (22) No. 4 spirit tank; (23) cabin for two seamen; (24) battery room; (25)

called a cofferdam, so that the machinery and boilers are completely cut off from the cargo. Tankers tend to spend far more time at sea than dry-cargo ships since they can be loaded and discharged very rapidly and they remain in port only a short time. The Shell tanker shown above is one of the larger vessels of the Shell Tanker Fleet and on a normal voyage between the Persian Gulf and the United Kingdom she can carry a cargo of about 31,000 tons of crude oil. The Shell-Mex and B.P. Ltd. tanker, which is one of a fleet of

THEY ARE THE FIRST TO HAVE CYCLOIDAL PROPULSION.

accommodation entrance; (26) cabin for two seamen; (27) galley; (28) jolly boat; (29) single Schat-type davit; (30) water tanks; (31) engine room skylight; (32) servomotor; (33) driving shaft; (34) four propeller blades.

nine, is now used for work in the estuaries around Britain. She is the first British tanker to be fitted with cycloidal propulsion, the Voith-Schneider propelling unit, which takes away the need for the conventional rudder and makes navigation considerably easier. The Esso ships are seen plying between the Persian Gulf and the refinery at Fawley.



SISTER SHIPS PASSING IN THE MEDITERRANEAN: ESSO GUILDFORD SEEN FROM ESSO DURHAM ON THE VOYAGE BETWEEN FAWLEY AND THE PERSIAN GULF.

THE FORMATION OF OIL-BEARING SEDIMENT.

THE OIL WE TAKE OUT OF THE GROUND TODAY HAD ITS ORIGIN IN THE FAR DISTANT PAST. IN ANCIENT SEAS, THAT HAVE LONG SINCE DISAPPEARED, BILLIONS OF TINY SEA CREATURES LIVED AND WHEN THEY DIED, THEIR BODIES SANK TO THE BOTTOM, MINGLING WITH DECAYING VEGETATION AND WITH MUD AND OTHER MATTER. IN THE COURSE OF TIME THEY HARDENED AND FORMED SHALE IN WHICH OIL FIRST TOOK SHAPE.

CREATURES
SINKING.
THEIR BODIES
MIX WITH
OTHER MATTER
ON THE BOTTOM

IN THE COURSE
OF BILLIONS OF
YEARS THE
SEDIMENT
BUILDS UP AND
SOLIDIFIES.

IN THE COURSE OF TIME THE EARTH'S CONTOURS WERE CHANGED BY THE BUCKLING OF ITS CRUST AND THE SEDIMENT WAS COMPRESSED INTO ROCK LAYERS IN WHICH OIL WAS FORMED AND TRAPPED.

BUCKLED
STRATA

STRATA
STRONGLY
FOLDED AND
BROKEN.

GEOLOGICAL SURVEYING

FROM THE ARCTIC TO THE TROPICS
GEOLOGISTS ARE AT WORK
EXAMINING ROCK FORMATIONS
THAT EVENTUALLY MAY LEAD TO THE
DISCOVERY OF OIL.

SEISMOLOGY

SHOCKS ARE PRODUCED BY
EXPLOSIONS, AND THE NATURE OF THE
STRATA IS DISCOVERED BY RECORDING
THE ECHOES.

THE SEARCH FOR PHOTO-GEOLOGY

OIL A SERIES OF OVER-LAPPING PHOTOGRAPHS GIVE A COMPLETE PICTURE OF THE AREA UNDER EXAMINATION, WHICH MAY BE HUNDREDS OF SQUARE MILES.

DRILLING

TO FIND OIL.
DRILLING DERRICK
ABOUT 136 FT. HIGH

THE SOURCE OF OUR
OIL SUPPLY.

OIL PIPE LINES IN HILLY COUNTRY

THE PIPE LINES CARRY THE CRUDE OIL FROM THE OILFIELDS ACROSS DESERTS, OVER OR UNDER RIVERS, THROUGH HILLY TERRAIN TO THE OIL PORTS, WHENCE THE TANKERS CARRY THE OIL OVERSEAS. IN CERTAIN COUNTRIES THE PIPE LINES LEAD DIRECT TO THE REFINERIES.

THE TANKER

THESE LARGE VESSELS BRING THE CRUDE OIL FROM THE OIL PORTS IN VARIOUS PARTS OF THE WORLD, TO THE REFINERIES SITUATED IN THE COUNTRY THAT WILL ACTUALLY USE THE SHIP'S CARGO.

THE OIL REFINERY

THE CRUDE OIL MUST BE PUT THROUGH A SERIES OF PROCESSES KNOWN AS REFINING TO PRODUCE THE WIDE RANGE OF PETROLEUM PRODUCTS THAT ARE ALL IMPORTANT IN OUR WORLD TODAY.

THE INSTALLATION

IN SOME CASES THE OIL GOES STRAIGHT FROM THE REFINERY TO THE CUSTOMER BUT GENERALLY THE FUEL FROM THE REFINERY IS SENT TO A LARGE DEPOT KNOWN AS THE INSTALLATION.

FROM THE INSTALLATIONS THE FUEL GOES TO SMALLER STORAGE PLANTS, KNOWN AS DEPOTS, EACH SERVING A DEFINED AREA, AND FROM THERE THE ROAD TANKERS DISTRIBUTE THE OIL TO THE FILLING STATIONS.

A TERYLENE DRESS MADE FROM SYNTHETIC TEXTILE

EXAMPLES OF THE EVER WIDENING
RANGE OF ARTICLES MANUFACTURED
FROM PETROLEUM CHEMICALS.

ARTICLES MADE FROM CARLONA POLYETHYLENE

INSECTICIDE

THE TREASURE YIELDED BY ROCKS UNDER EARTH AND SEA: THE

Crude oil is thought to have been formed, millions of years ago, by the decomposition of countless numbers of microscopic sea creatures which, upon dying, sank to the ocean bottom and mingled with mud and sedimentary materials. The decayed matter became buried deeper and deeper, and, acted upon by anaerobic bacteria over millions of years, gas and oil was formed. These, squeezed out of the "source-rock," made their way upwards through the "reservoir rock." But, in order to be caught in the "traps," accumulated in the earth's crust led to the formation of traps, in which the gas and oil could be in permeable layers known as "reservoir rocks." This accumulated oil is

prevented from escaping at the surface by an impermeable layer—called a “cap-rock.” It is the task of the geologist or surveyor to locate these reservoirs—or oilfields—and the most useful method is to set off a charge of dynamite in the earth. The resultant shock waves travel downwards through the earth and are reflected in echoes of different intensities, which are picked up on a seismometer and recorded on a seismograph—a most sensitive instrument which can detect the slightest vibrations. The intensity of the reflected waves from the explosive and the echo shows the depth of the layer. Prospecting for oil is a most expensive business on which the great oil companies spend great

LIFE STORY OF OIL—FROM ITS FORMATION TO THE REFINERY.

sums every year their endeavour to tap new sources. The search for oil—particularly in remote regions—is greatly helped by the aeroplane and a series of overlapping aerial photographs will help to give a good picture of the area under examination—which may extend over hundreds of square miles. For actual drilling a strong steel derrick, usually over 130 ft. high, is used. From it is suspended the block-and-pulley tackle which, operated by the driving engine, raises and lowers the drill pipe, which is lowered down into the pipe and out again. When the reservoir of oil is reached, often at great depth, huge quantities of oil

may be released—high pressure and to stop oil from running to waste—and to prevent fire—a blowout preventer is used to cap and control it. The oil is then conveyed by pipeline to the refinery, or to a marine terminal, where it will be loaded on to a tanker for transport to refineries in far-distant countries. In the refinery the oil undergoes a complicated series of processes to produce the wide range of petroleum products that form the basis of modern living. In the modern world, where the standard of living in the U.K. is destined to rise, the petroleum chemical industry. Some of the manifold uses of oil are illustrated in the drawing above. *Drawn by our Special Artist G. H. Davis.*



THE LARGEST OIL REFINERY IN THE BRITISH COMMONWEALTH WITH ITS MARINE TERMINAL: THE GREAT ESSO PLANT AT FAWLEY, WHERE THE 4200-FT. JETTY—ON SOUTHAMPTON WATER—CAN TAKE FULLY-LOADED SHIPS OF UP TO 65,000 TONS.



THE RAPID UNLOADING OF PRECIOUS CARGO FROM *WORLD GRANDEUR*: A WOODFIELD ROCHESTER "U" BOOM HOSE-HANDLING STRUCTURE IN USE AT THE FAWLEY TERMINAL. THE STRUCTURE IS 70 FT. HIGH AND HAS FIVE 10-IN. CARGO HOSES, EACH WITH AN HOURLY CAPACITY OF 1200 TONS.



A VIEW OF THE CONTROLS—DEVELOPED BY HOLMAN BROS., LTD., OF CAMBORNE—OF THE REMARKABLE "U" BOOM. THE HOSES ARE WORKED BY AIR-OPERATED MOTORS CONTROLLED FROM A CONSOLE AT THE TOWER BASE.

THE SWIFT UNLOADING OF A REFINERY'S LIFE-BLOOD: THE PASSAGE OF OIL FROM TANKER TO THE ESSO PLANT AT FAWLEY.

At the Esso refinery at Fawley, Hampshire—built at vast cost, and the largest oil refinery in the British Commonwealth, employing over 3,300 workers—not only fuel oils and lubricants, but a wide range of chemical products, such as ethylene, butadiene and heptene, are being produced in ever-increasing quantities. Plastics, synthetic textiles, synthetic rubber, detergents and paints, are produced from these chemical raw materials processed in the rapidly-developing Chemicals Plant, which cost £10,000,000 to construct. The oil is transformed into chemicals by the breaking down of large chemical molecules

into simple carbon-hydrogen molecules, which are then regrouped and further processed. Adjoining factories and plants supplied direct by the feedstock from the Esso refinery are the International Synthetic Rubber Co. Ltd., supplied with butadiene, the major component of general-purpose synthetic rubber; and Monsanto Chemicals, Ltd., and Union Carbide, Ltd., to which ethylene—used for the manufacture of anti-freeze agents and synthetic fibres—is carried by pipeline. These, and other products, such as sulphur, are being supplied in increasing quantities to general industry.

RUSSIA AT BAY.

"STALINGRAD—POINT OF RETURN." By RONALD SETH.*

An Appreciation by SIR CHARLES PETRIE.

AMID the spate of books on the Second World War which is descending upon us at the present time there is singularly little of interest or value regarding the Russo-German Front. The German accounts cannot, for the most part, be accepted without careful scrutiny, for the veracity of defeated men is rarely above suspicion, while the Russian narratives are usually so uninformative and so steeped in heroics as to be useless; as Major-General Fuller has well written, "War may be a science or an art, but its reporting is mainly a dodge." It is, therefore, all the more valuable to have this admirable and unofficial account of the Stalingrad operations from the pen of a practised writer. Mr. Seth's sympathies are, not unnaturally, with the Russians, but he is scrupulously fair to their opponents, and he gives credit wherever it is due, irrespective of the side which is the recipient. Indeed, there is little to which the most captious critic could take exception save, perhaps, that the author has a habit of describing the Germans as Fascists when they were Nazis, which is somewhat irritating and can be confusing, since there were Italian troops in the field at varying stages of the campaign.

Not the least interesting or important part of the book is the comparison between the control exercised respectively by Hitler and Stalin over their armies at the front:

Arising out of Hitler's personal assumption of direction, no formation of divisional status and above could be moved by an Army Group Commander without the Führer's previous consent. Conversely, he could order the movement of any formation and the Group Commander was compelled to obey. This arrangement was contrary to all the principles of German military leadership, which had always relied on commanders at all levels to show initiative and preparedness to accept responsibility. . . . Hitler's interference drastically changed all this.

This state of affairs is contrasted with that prevailing in the Russian High Command:

But perhaps the chief advantage the Russians possessed over the Germans was that they had no self-styled Napoleon to interfere with the military men. True, Stalin gave himself the rank of Marshal and Generalissimo, and took the Supreme Command; but, unlike Hitler, Stalin was an astute strategist and tactician. The organisation of the Russian command was so designed that no military situation or circumstance could arise which could not be dealt with quickly and effectively.

Not the least of the handicaps under which the Third Reich laboured in the war was that although Hitler did not possess one tithe of Napoleon's ability, he made the same mistakes as the French Emperor when the tide was beginning to turn against him. The Corsican steadfastly refused to cut his losses by any abandonment of occupied territory, so that in 1812 he was compelled to leave in Spain many of his veterans whose presence with the *grande armée* might have made all the difference in the Russian campaign, and in the following year some of the best French troops were shut up in garrisons all over Germany, where they served no useful purpose at all, being contained, as often as not, by local militia. Hitler pursued exactly the same policy at Stalingrad, and in spite of the requests of von Manstein, he refused to allow von Paulus and the German Sixth Army to break out, once they had been surrounded and the besiegers had become the besieged, with the result that 132,000 men were killed or missing and another 123,000 became prisoners of war. The reason for this was largely political; for coming as the crisis did on the top

of Rommel's defeat at El Alamein and the Allied invasion of North Africa, a withdrawal might have been seized upon by the dissatisfied German generals to discredit Hitler and carry out a military *coup d'état*.

The author is of the opinion that one of the errors of the German Supreme Command was "guarding vulnerable flanks with foreign troops whose organisation and type of command was different from the German," but he does not agree with those German apologists who would lay the blame for the final disaster upon their allies. There will be general agreement with his statement that "the heart of the Italian troops was certainly not in this fight so far away from their own

five tons of sweets and numberless thousands of contraceptives, four tons of majoram and pepper, a ton of protective cellulose covers for grenades which did not exist, and 200,000 Dr. Goebbels' propaganda leaflets arrived. The sweets alone were issuable, but the rest were no use at all."

By then Hitler must have known his Goering, so it is difficult to disagree with the author when he says that he "must thus share the responsibility for the failure of the air-lift with the Reichsmarshal."

All the same, the original idea behind Hitler's strategic plan had been right; namely, to strike at his enemy's economic strength, which was the basis of his military power. It was in the realisation of this plan that blunder after blunder was made, and the greatest of these was that, because the vastness of Russia prevented him from bringing the Red Army to a decisive battle, he failed to see that it was imperative to immobilise it before setting out to overrun its vital areas of operation. This could have been done had he occupied Moscow, which was the hub of the Russian movements; instead, like Charles XII and to a greater extent than Napoleon, he lost the initiative.

THE AUTHOR OF THE BOOK REVIEWED ON THIS PAGE: MR. RONALD SETH. Born in 1911 and educated at Cambridge, Mr. Seth became a Professor in English at the University of Tallinn, Estonia. During the war he entered the R.A.F., and in 1942 was trained in espionage and sabotage before being dropped into Estonia by parachute. Betrayed to the Germans he was kept in solitary confinement for a year, finally escaping to Switzerland in April 1945. Since the war he has written several books, and now gives his occupation as "occasional housewife." He is married and has two children.



WHERE SO MANY GERMAN AND RUSSIAN SOLDIERS DIED DURING WORLD WAR TWO: STALINGRAD, PART OF THE REBUILT CITY, WITH THE RIVER VOLGA FLOWING QUIETLY BY.



THE REBUILT STREET OF PEACE AFTER THE HOLOCAUST OF WAR: A SCENE IN POST-WAR STALINGRAD, THE SCENE OF ONE OF THE FIERCEST BATTLES OF THE SECOND WORLD WAR, AND THE SUBJECT OF THE BOOK REVIEWED BY SIR CHARLES PETRIE ON THIS PAGE.

These photographs are not from the book under review.

frontiers," but there will be some surprise at his further allegation that "the Hungarians' reputation as warriors was little better, and by their comrades were regarded as broken reeds even before the battle began"; in the First World War we were told that the Hungarian units formed the core of the Austro-Hungarian Army, but perhaps they found the Habsburgs more inspiring than the Führer. Mr. Seth speaks better of the Rumanians, who seem not wholly to have forgotten the example set by their ancestors at Plevna.

One man in particular comes very badly out of the operations, and that is Goering. He promised Hitler an air-lift which would enable the Sixth Army to hold out until it was relieved, but it has never been elucidated why he made such a promise, for there was not the slightest chance of keeping it with the aircraft at his disposal. Even when supplies did get through there was no telling what they would be. "One day, for example, instead of bread and flour,

After his great victory at Poltava in 1709, Peter the Great entered Kiev, and there in the Church of St. Sophia he held a thanksgiving service; the monk who preached the sermon uttered a profound truth when he said, "When our neighbours hear what has happened, they will say it was not into a foreign country that the Swedish Army and the Swedish power ventured, but rather into some mighty sea. They have fallen in and disappeared, even as lead is swallowed in water." This was the secret of Russia's might which Hitler in his strategy missed. Its answer could only be to deprive the Russian armies of their mobility, for then space would have been transformed for them from an ally into a deadly enemy.

It is impossible in reading these pages not to wonder what would have happened if the

Germans had had the sense to come into Russia as the liberators of the country from Communism, and kept their word: all the evidence goes to show that where they did this the Russian people rallied to them, and although Mr. Seth does not argue this point, he makes it quite clear that the desperate resistance which the invader encountered was in no small measure due, not to enthusiasm for the tenets of Marx and Lenin, but to the horror and fear caused by German behaviour. Indeed, not the least attractive feature of this book is the skilful way in which the survivors' stories are used to make the reader feel that he was present at the scenes they describe, and they well illustrate the determination with which the city was defended—all of which was in marked contrast with the events of July 1, 1919, when, in its previous incarnation as Tsaritsin, it was captured by Major E. M. Bruce and six English mechanics in a *Mark V* tank.

*"Stalingrad—Point of Return." By Ronald Seth. (Gollancz; 21s.)



THE WORLD OF SCIENCE.



TOADS FROM NOWHERE.

By MAURICE BURTON, D.Sc.

AND that brings us to the "toad-in-the-hole" stories. They have been told for a long time now, by quarrymen and miners, and by others, and the pattern of them is regular. It is of a rock, large stone or lump of coal being split open revealing a cavity in which lies a toad that dies on exposure to the air or else leaps out of the cavity still hale and hearty. The inference is, always, that the amphibian was incarcerated when the rock or coal was laid down. A century ago, Frank Buckland, in his "Curiosities of Natural History," quoted the story as given in a newspaper cutting found among his father's notes. It varies slightly from the usual story but is worth quoting because it reflects the attitude of mind of those who retail the story.

It reads:

A few days ago, as two colliers were working coal in a pit in the neighbourhood of Bathgate, Linlithgowshire, they were astonished, on breaking a large piece of coal, to see a living frog skip nimbly from it. The niche in which it had lived was perfectly smooth, and of the exact shape of the frog. The hind legs of the animal are at least twice as long as those of the ordinary frog, the fore legs almost gone. It is of a beautiful bronze colour. It leaped briskly about the moment that it was liberated from its dark abode. How many generations it may have been shut up from light and air it is impossible to say; certain it is that although diminutive in form, and with great brilliancy of eye, it is a very antediluvian-looking customer. It inspires us with a kind of fear to be brought into contact with a living being that has, in all probability, breathed the same air as Noah, or disported in the same limpid stream in which Adam bathed his sturdy limbs.

Buckland's father was less carried away by the romance of the occasion than was the writer of these words, and he set about carrying out tests. He took a large block of limestone and had drilled in it twelve circular cells, each about a foot deep and 5 ins. in diameter, with a shoulder near the upper margin, to take a circular piece of glass. The idea was to place a toad—because toads, not frogs, were usually the subject—in each cell, seal the glass on to the shoulder, and then cover the surface with a slate and bury the block 3 ft. in the earth. By digging up the block at intervals, he would be able to remove the slate and inspect the toads through the windows without breaking the seals.

A second block, this time of sandstone, was prepared in a similar way except that the cells were only 6 ins. deep. Large and small toads were placed in the cells, one to each, after having been weighed. The two blocks were buried on Nov. 25, 1825, and were dug up again on Dec. 10, 1826. Every toad in the smaller cells of the compact sandstone was dead, and the bodies of most of them so much decayed that they must have been dead some months. The greater part of those in the block of limestone were alive. Some had lost weight but two had put on weight. One of these was in a cell in which the glass window had been cracked; and it is probable that the seal of the second cell was imperfect. It was possible, therefore, that small insects had made their way in and that the two toads had fed on them. To support this idea there was "a large assemblage of minute insects" inside another cell the window of which had been broken although the toad

occupying that cell was dead. And there was "a similar assemblage also on the outside of the glass of a third cell."

The limestone block was buried again, but was dug up at intervals for inspection, and each time there was seen yet another casualty, and all the toads were dead by the end of two years following the commencement of the tests. Many a toad

must have been stoned or stabbed to death because of a belief that it could eject a poison, yet even bearing this in mind does not make death by deliberate starvation the more acceptable, but no doubt Buckland Senior was imbued with one aim only: to set the "toad-in-the-hole" stories at rest once and for all. Subsequent history shows only too clearly that in this he failed, since such stories are still being retailed, and with sincerity.

His tests show several important conclusions. First, that a toad cannot survive in a hermetically-sealed chamber inside a block of mineral. This is no more than we should expect. Secondly, they demonstrated that survival is possible in such a chamber provided there is the minutest crack through which extremely small insects can penetrate. This again could have been arrived at on *a priori* grounds, or by less drastic experiments.

There are other rational arguments against the possibility, too often accepted, that the toad alleged to have been found in a rock had been there for a very long period of time. The first is that no amphibian is on record as having lived longer than 29 years. And the longest-lived toad, so far as we know, is the American toad, with 23 years. Secondly, we can rule out the possibility of a toad having been incarcerated when a block of coal was being formed, since this occurred millions of years before toads came into existence. Since limestones are formed in the sea and there are no marine toads, we can rule out the chance of toads having been trapped in these. Similar arguments can be advanced for other mineral formations.

Altogether, then, while accepting that the tellers of such stories are sincere, there are only a few explanations possible. Either the toad (or the frog, as is sometimes the case) was able to enter the block of stone or coal when it was small, through a hole in the block that escapes observation, and has been there only a few years, or there is an optical illusion. And here I would recall a personal experience.

When visiting quarries with a friend in search of fossils I struck a nodule of rock with

a hammer. The rock split open and exactly at that moment a toad jumped through the air appearing to come from between the two halves of the nodule of rock that lay in front of me. My friend exclaimed, and in doing so voiced my own thoughts, that but for the fact that there was no cavity in the nodule I had just split open we should have had no alternative than to suppose that the toad had come from inside the piece of rock.

Presumably the toad had been squatting unnoticed beside the place where I rested the rock to strike it, the blow of the hammer caused it to jump simultaneously, and since the human eye takes in far less than we imagine, especially of high-speed movement, the total effect was to produce an illusion. From that experience I am well able to believe that there are other occasions when quarrymen and miners may see what they think is a toad or a frog jump out of a piece of rock when it is split open, and they have every excuse for believing in what they think they have seen.



"WILD, WILD EYES", BUT PROBABLY WITHOUT THE "KISSES FOUR"; THE COMMON TOAD WHICH IS APT TO TURN UP IN WEIRD AND UNEXPECTED PLACES, AND IS THE SUBJECT OF MANY PERSISTENT BELIEFS.



DR. BURTON EXAMINES ON THIS PAGE THE LIKELIHOOD OF THE "TOAD-IN-THE-HOLE" LEGEND BEING TRUE. THERE IS A LONG-STANDING BELIEF THAT TOADS THAT BECOME IMPRISONED IN ROCKS ARE CAPABLE OF SURVIVING HUNDREDS OF YEARS. THERE ARE EVEN FANTASTIC REPORTS OF LIVE TOADS BEING FREED FROM SEAMS OF COAL, MANY MILLIONS OF YEARS OLD.

Photographs by Jane Burton.

PERSONALITIES OF THE WEEK: PEOPLE AND EVENTS IN THE PUBLIC EYE.



A FORMER DEAN OF EXETER: THE LATE REV. DR. S. C. CARPENTER.

The Rev. Dr. S. C. Carpenter, who died on August 18 aged eighty-one, was Master of the Temple from 1930 to 1935 and Dean of Exeter from 1935 to 1950. Educated at Caius College, Cambridge, he was Examining Chaplain to the Bishop of Manchester from 1927 to 1931.



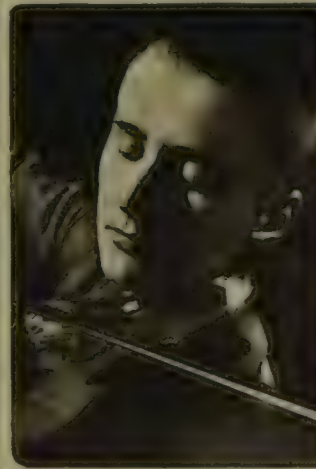
A GOVERNOR OF THE BANK OF ENGLAND: THE LATE LORD CATTO.

Lord Catto, who died on Aug. 23 at the age of eighty, was Governor of the Bank of England from 1944 until 1949. Starting his career as an office boy—at the age of sixteen—with a firm of shipowners at Newcastle-upon-Tyne, Lord Catto soon rose to high position.



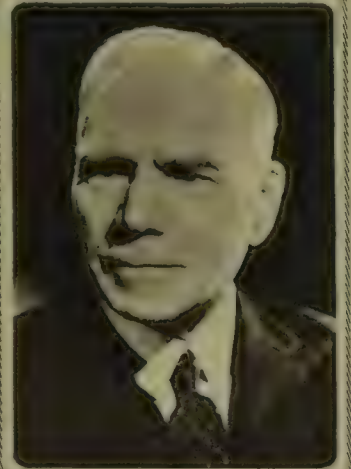
APPOINTED BRITISH AMBASSADOR AT TEL AVIV: MR. P. F. HANCOCK.

It was recently announced that the Queen had approved the appointment of Mr. Patrick Francis Hancock, who has been head of the Western Department at the Foreign Office since 1956, as Ambassador at Tel Aviv. Mr. Hancock entered the Foreign Service in 1937.



THE SUBJECT OF MUSICAL DISCORD: MME. JOHANNA MARTZY, THE VIOLINIST.

It was possibly for political reasons that the Czech Philharmonic Orchestra cancelled its concerts—in two of which the Hungarian violinist was to have been soloist—at the Edinburgh Festival. It seems that she has had "too much" contact with Hungarian refugees.



A DISTINGUISHED CHEST SPECIALIST: THE LATE SIR ROBERT YOUNG.

Sir Robert Arthur Young, the celebrated specialist in diseases of the chest and teacher of medicine, died on August 22 at the age of eighty-seven. After an exceptionally brilliant student career at Middlesex Hospital, Sir Robert subsequently filled many important positions.



SMILING WINNERS OF THE WIGHTMAN CUP: THE VICTORIOUS UNITED STATES TENNIS TEAM WITH THEIR TROPHY. THEY WON BY FOUR MATCHES TO THREE.

After winning the Wightman Cup last year the British team failed to retain the trophy this year, losing by four matches to three at Sewickley, Pittsburgh. Perhaps the finest match was that in which Mrs. Fleitz beat Miss Christine Truman, 6-4, 6-4. Mrs. Fleitz, who routed Miss Angela Mortimer 6-2, 6-1, was in great form, but Miss Truman, who had beaten Miss Darlene Hard, gave a gallant performance.



A BRILLIANT FOURTEEN-YEAR-OLD SOLOIST AT A PROMENADE CONCERT PLAYING A MOZART PIANO CONCERTO: MISS KATHLEEN JONES, OF LEEDS.

Miss Kathleen Jones, who is fourteen and comes from Leeds, had a marked success when she played a Mozart D minor piano concerto on August 22 with the National Youth Orchestra under the direction of Mr. Walter Susskind at a Promenade Concert in the Royal Albert Hall. The National Youth Orchestra is going on a concert tour of Western Germany. They will play in Hamburg and in West Berlin.



PICTURED JUST AFTER THEIR WEDDING AT SOGNE, SOUTHERN NORWAY: MR. STEVEN ROCKEFELLER AND MISS ANNE-MARIE RASMUSSEN.

The wedding between Mr. Steven Rockefeller, son of the Governor of New York, and heir to great fortune, and Miss Anne-Marie Rasmussen, a Norwegian grocer's daughter, naturally attracted much publicity.



VICTOR IN THE FIGHT FOR HARRODS: MR. HUGH FRASER.

On August 24 Mr. Hugh Fraser, the millionaire, won control of Harrods—after a long battle—when Mr. Bedford, head of Debenhams, withdrew from a hard-fought share contest.



A PIONEER OF AVIATION: THE LATE MR. C. GRAHAME-WHITE.

Mr. Claude Grahame-White, who died on August 20 a few days before his eightieth birthday, was famous for his great flight from London to Manchester in 1910.



IN LONDON JUST BEFORE THEIR MARRIAGE: SIR THOMAS BEECHAM WITH HIS TWENTY-SEVEN-YEAR-OLD SECRETARY, MISS SHIRLEY HUDSON.

The wedding of Sir Thomas Beecham, the famous conductor, and his secretary who is his orchestra manager, took place in secret at Zürich Town Hall on August 10. Sir Thomas's second wife, Betty Humby, died last year.

FROM PENNY BLACKS TO A NEW GUIDED MISSILE: SOME RECENT EVENTS.



TERRIFYING CHARACTERS FOR A DARK NIGHT ENCOUNTER: PART OF A SHOW PUT ON AT THE ROYAL NAVAL DIVING SCHOOL AT CHATHAM, KENT, SHOWING VARIOUS FORMS OF PROTECTIVE CLOTHING AVAILABLE FOR DIVERS.



A VILLAGE SURFACES AFTER FOURTEEN YEARS: PART OF WHAT WAS ONCE THE VILLAGE OF DERWENT, DERBYSHIRE. Owing to the unusually dry summer the water-level in Ladybower Reservoir, in the Peak District of Derbyshire, became so low that the roof of a building belonging to what was once the village of Derwent reappeared above the surface, looking like a raft floating on the water. The reservoir was inaugurated in 1945.



ABOUT 6 FT. TO GO: MEMBERS OF A ROYAL ENGINEERS BOMB DISPOSAL TEAM WHO ARE DIGGING NEAR THE TATE GALLERY, LONDON, FOR A BOMB BELIEVED TO LIE AT A DEPTH OF ABOUT 16 FT. AT THIS STAGE IN THE EXCAVATIONS 6 FT. OF RUBBLE LAY BELOW THE MEN, WHO WERE EXPECTED TO REACH THEIR GOAL VERY SOON.



PROBABLY THE MOST VALUABLE BLOCK OF STAMPS TO BE PLACED ON THE MARKET FOR THIRTEEN YEARS: FORTY-THREE PENNY BLACKS OF 1840, ALL UNUSED, WHICH ARE TO BE OFFERED FOR SALE ON OCTOBER 12 BY H. R. HARMER LTD.



COINS FOR WHICH A REWARD OF £2700 HAS BEEN GIVEN: PART OF THE TREASURE UNEARTHED BY TWO WORKMEN NEAR NORWICH IN 1958. 881 COINS WERE FOUND, MOSTLY EAST ANGLIAN OF THE EARLY 10TH CENTURY.



TO BE RE-ERECTED IN THE GROUNDS OF GATWICK MANOR, SURREY: THE LATE 18TH-CENTURY JOLESFIELD WINDMILL AT PARTRIDGE GREEN, SUSSEX.

Work was recently begun on the dismantling of this old smock mill, in which only the cap and sails revolve. Its new owner intends to re-erect it and restore it to full functioning in the grounds of the 13th-century Gatwick Manor, on the London-Brighton road.



AFTER ITS SMOOTH LANDING ON THE THAMES AT BATTERSEA, OPPOSITE THE LONDON "HELIPORT": A NEW U.S. VERTOL 107 HELICOPTER, POWERED BY TWIN GAS TURBINE ENGINES. An unusual recent sight on the Thames was this helicopter which gently came to rest on the calm waters. The craft, an American Vertol 107, the prototype of the U.S. Army YHC 1A, is being shown while it is in Britain to officials of British European Airways.



A NEW AUSTRALIAN GUIDED MISSILE: THE MALKARA ANTI-TANK WEAPON WHICH HAS UNDERGONE VERY SUCCESSFUL TRIALS AT THE MINISTRY OF SUPPLY'S RANGES IN SCOTLAND. It was announced on August 23 that a "substantial" order had been placed for this weapon, which has undergone extensive trials at Kirkcudbright. The Malkara, which has been adopted as standard equipment by the British Army, weighs about 300 lb.

A GREAT SCULPTOR AND HIS WORK: THE LATE SIR JACOB EPSTEIN.



"BEHOLD THE MAN": EPSTEIN IN HIS STUDIO WITH THE 11-FT.-HIGH STATUE, THE SUBJECT OF RECENT CONTROVERSY IN SELBY ABBEY.



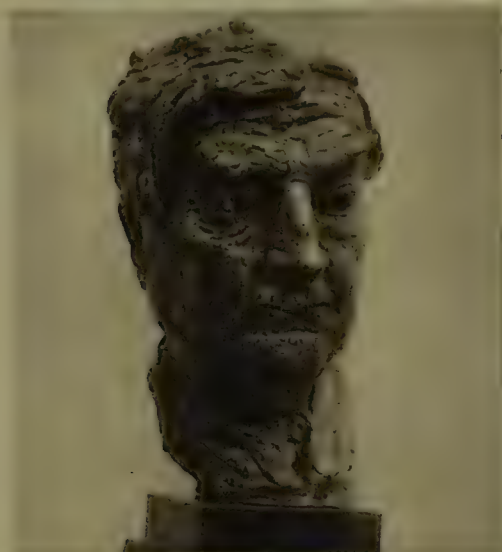
A HEAD OF A MADONNA IN BRONZE, EXECUTED IN 1927. THE MODEL WAS AN INDIAN WOMAN.



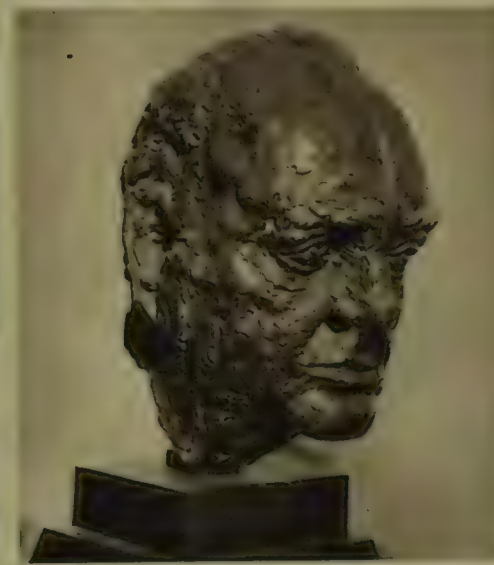
THE HAND OF THE MASTER AND MASTERPIECE: A STUDY OF THE FAMOUS SCULPTOR WHO DIED ON AUGUST 19. (Portrait study by Karsh of Ottawa.)



"MORNA," A BRONZE OF 1936: HIS PORTRAIT BRONZES ARE PROBABLY HIS FINEST WORKS OF ALL.



ANOTHER POWERFUL AND FAMOUS BRONZE: HIS PORTRAIT OF DR. VAUGHAN WILLIAMS, OF 1950.



A PORTRAIT HEAD OF SIR WINSTON CHURCHILL, ANOTHER BRILLIANT WORK IN BRONZE.

Sir Jacob Epstein, who has been described as the greatest sculptor of his generation, died of a coronary thrombosis on August 19. For much of his life his works caused heated controversy between his growing number of admirers and the staunch body of critics who found his sculptures crude and barbaric. The last of these controversies took place only a few weeks before he died, when one of his largest works, "Behold the Man," which

he offered to Selby Abbey, was banned by a consistory court. Epstein was born in New York in 1880 of Russian-Polish parents, but soon moved to the Continent and finally to London, where he adopted British nationality. One of his first large commissions was for eighteen figures for a building then used by the British Medical Association. The nudity of these figures led to outraged moral outbursts which set the pattern of later criticism.

QUEENSLAND VISITED BY PRINCESS ALEXANDRA IN ITS CENTENARY.



A SMALL SCATTERING OF FARMS, CHURCHES AND HOUSES BY THE BRISBANE RIVER: QUEENSLAND'S CAPITAL AS IT APPEARED IN 1862.



WITH THE TOWN HALL CLOCK TOWER OVERLOOKING ALL: THE CENTRAL BUSINESS QUARTER OF MODERN BRISBANE, A CITY WITH 550,000 INHABITANTS.



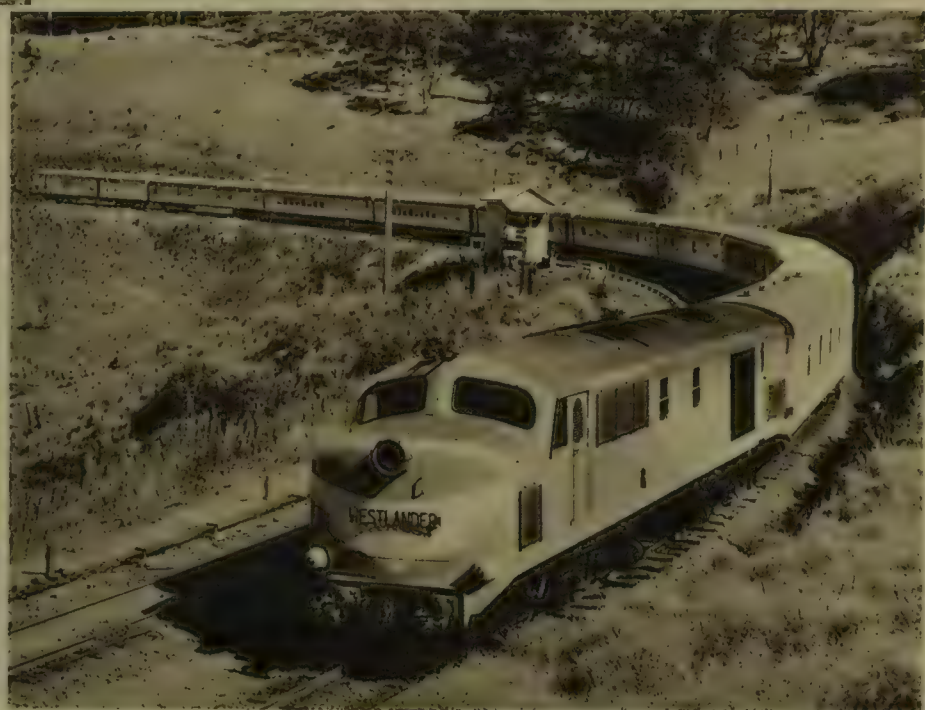
THE PORT FOR THE GREAT CLONCURRY FIELD, SITUATED 700 MILES AWAY TO THE WEST: A VIEW OF PROSPEROUS TOWNVILLE FROM CASTLE HILL.



BRISBANE AT THE CLOSE OF THE LAST CENTURY: THE MAIN STREET OF QUEENSLAND'S CAPITAL WITH ITS HORSE-DRAWN VEHICLES AND WOODEN BUILDINGS.



TRANSPORT AND COSTUME OF OVER NINETY YEARS AGO: AN ELEGANT SCENE ON ONE OF QUEENSLAND'S EARLY RAILWAYS, WHICH CAME INTO BEING IN THE 1860'S.



PRESENT-DAY TRANSPORTATION IN QUEENSLAND: ONE OF THE TEN ENGLISH ELECTRIC 1500-H.P. DIESEL LOCOMOTIVES IN SERVICE ON QUEENSLAND'S RAILWAY NETWORK.

Brisbane, the flourishing capital city of Queensland, and visited in its centenary year by her Royal Highness Princess Alexandra of Kent during her six-week tour of Australia, has been for the past months a scene of great celebrations which culminated in the opening by the Princess of the Royal National Centenary Show. The actual celebrations commenced in January, and in February Brisbane was the scene of many cultural activities: the Royal Ballet, under the directorship of Dame Ninette de Valois, gave performances of famous ballets, ranging from "Swan Lake" to "The Rake's Progress"; a Centenary

Art Exhibition was held; and the Queensland Symphony Orchestra gave a concert in the city's Botanic Gardens. Highlights of the celebrations from May to July were the Queensland Industries Fair, the Elizabethan Opera Season, and the Brisbane Saga, held in the City Hall. On December 10 the landing of the first Governor of Queensland, Sir George Ferguson Bowen, will be re-enacted in utmost detail, and the climax of the pageant will take place at the deanery of St. John's Cathedral, where the first proclamation of the new colony was read.



STEPPING FROM HER AIRCRAFT AT CANBERRA ON AUGUST 14: PRINCESS ALEXANDRA IS GREETED BY THE GOVERNOR-GENERAL, FIELD-MARSHAL SIR WILLIAM SLIM.



THE PRINCESS TALKING TO TWO ANGLICAN NUNS AS SHE LEAVES THE PARISH CHURCH OF ST. JOHN THE BAPTIST, CANBERRA, AFTER ATTENDING A SERVICE.



AFTER A LUNCHEON AT THE HOTEL CANBERRA: THE ROYAL VISITOR EMERGES WITH DAME PATTIE MENZIES, WIFE OF THE PRIME MINISTER, EARLY IN HER AUSTRALIAN TOUR.



WITH THE LOCAL DANCING CHAMPION, MR. KEN KNIGHT, A GOVERNMENT PRINTING COMPOSITOR, AT THE STATE BALL IN CANBERRA.



AT THE STATE BALL AT PARLIAMENT HOUSE, CANBERRA: MR. MENZIES, THE PRIME MINISTER, PRESENTS HER WITH A BROOCH ON BEHALF OF THE AUSTRALIAN PEOPLE.



PRINCESS ALEXANDRA PLACING A WREATH ON THE COMMEMORATIVE STONE AT THE WAR MEMORIAL IN CANBERRA.



IN BRISBANE: WEARING A PEACOCK-BLUE PRINTED DRESS, THE PRINCESS ARRIVES TO OPEN THE NEW ANZAC HOUSE. SHE HAD FLOWN THERE FROM CANBERRA ON AUGUST 18.

AT THE BEGINNING OF HER TOUR OF EASTERN AUSTRALIA: THE YOUNG PRINCESS ALEXANDRA OF KENT.

On August 14 Princess Alexandra of Kent stepped from her aircraft at Canberra to begin her six-week tour of all the larger cities in Eastern Australia. Elegantly dressed and looking happy in her new and important rôle, she was greeted by the Governor-General of Australia, Field-Marshal Sir William Slim. Also at the airport were Lady Slim, Mr. Menzies—the Prime Minister—Dame Pattie Menzies, Federal Ministers and members of the Diplomatic Corps.

Millions watched her arrival on television, and from the outset the Princess showed that this was not to be too formal a tour by walking over to a group of Junior Red Cross girls in uniform: one of them said to her "Welcome to Australia." She spent a few days at Canberra before flying to Brisbane on August 18 for the most important part of her tour. Queensland is celebrating its centenary as a separate, self-governing entity.

THE WORLD OF THE THEATRE.

SMALL SCALE.

By J. C. TREWIN.



OFTEN, during "King Lear," last play of the current Stratford-upon-Avon Festival, I seemed to examine this great tragedy through the wrong end of the opera-glasses. Charles Laughton plays the part on a very small scale, not every inch Shakespeare's King, and without noticeable cataracts and hurricanoes. At first, indeed, he is an almost cosily petulant monarch—I thought, irrelevantly perhaps, of Miss Farjeon's Nollekens of Norfolk—and he goes on to represent the onset of madness with a needle-point, case-book realism that, though it

was the most moving thing in the Stratford performance.

Maybe it was a tribute to Laughton, as it was to Glen Byam Shaw, that during the première one thought relatively little of the other players. Practically without exception, they were sound, unpretentiously right: they never got in the way. Lear, even when scaled down, must rule the tragedy, and our eyes and ears are for him. Mr. Shaw, whose last production this is in eight extremely distinguished years of directorship at Stratford-upon-Avon, has once again refused to add personal and capricious annotations to the text. He is the least unfretted of Shakespearians, and I hope very much that one day he will frame a full-scale Lear, not merely a skilful miniature. I need mention only two other players: Anthony Nicholls, in the constancy of Kent, and Zoe Caldwell, the Cordelia. For me she ranks with Barbara Jefford as the most genuinely exciting of the younger classical actresses. I would like to see and to hear her as Isabella and Portia.

A fairly recent Stratford Lear—for six Festivals pass quickly—is acting now at the Queen's Theatre in a very different kind of part, the "publishing scoundrel" in his own version of Henry James's "The Aspern Papers." This is deliberately a

small-scale piece, beautifully composed by Sir Michael Redgrave, and bound, I feel, to stay in the grateful mind. It is curious how, once more, James, who had so longed to be a successful dramatist, becomes one at second-hand. He could not contrive his own plays, though he went on writing them and the collected volume is large; but his novels, sympathetically re-worked for the stage—and no treatment could be more sympathetic than Sir Michael's—can reveal the gold of the theatre.

"The Aspern Papers" is the novel about an American biographer in the ebb of last century, who contrives in Venice to get access to the house where the private papers of a dead poet rest. They are in the keeping of a former mistress, now an implacable and very old recluse living with a niece who is simple-hearted and ready to respond to an ingratiating and basically sincere stranger, with a genuine æsthetic imagination. James's interplay of character in the quiet Venetian palace has been transferred most accurately from page to stage, and not until the night is over do we realise that the story, considered simply as anecdote, is insubstantial. We have been high in admiration of its psychological cunning and the matching craft of its players: Sir Michael as the man with a quest who does not see where the quest may lead him; Beatrix Lehmann as the frightening old woman who can hold her position to the end; and Flora Robson, employing all her sensibility as the deluded niece whose disappointment—though different in degree—must remind us a

little of that other spinster in "The Heiress."

I found this a rare combination of acting and writing: some, maybe, will consider that it lags, but I was conscious of nothing but the stresses and strains, absorbing in their complexity, revealed to us in the lost Venetian world of sixty and seventy years ago. It is a sharp joy to know that Basil Dean's honoured name is attached to a production of such quality as "The Aspern Papers." A proud old woman in her last smoulder, a fading niece, a trunk of documents, a persistent inquirer: the material may not seem to be much, but it is, believe me, the fabric of a night in the theatre that will be respected and remembered.

Finally, as the last play of a strange trinity, "Look After Lulu!" (and be careful of the exclamation-mark). It is Noël Coward's version of Feydeau's "*Occupe-toi d'Amélie*" at the Royal Court, of all theatres: something that seems to be smaller than its original. Feydeau's ample gusto is thinned, and Coward is too fond of the elementary joke that probably he never troubled to revise. But I can say at least that when he and his original really do get together, matters are agreeably wild. Possibly, in future, I may summon the night for one sentence. At the end of the second act Lulu, a cheerful cocotte who is at the heart of the nonsense, builds in a single interminable speech, a kind of *aide-mémoire*, the entire house of cards that is the plot. We do not often have the plot of a farce presented to us like this, unadorned, and somebody on the stage makes—in the true voice of Coward—the only possible comment: "This is becoming farcical!"



CHARLES LAUGHTON AS KING LEAR AT STRATFORD-UPON-AVON. "A PERFORMANCE," WRITES JOHN TREWIN, "OF SOME QUIET INTIMATE PATHOS... BUT I SHALL NOT THINK OF IT AS ROYAL LEAR." (FIRST NIGHT, AUGUST 18.)

gets us to regret the old man's domestic griefs, does not persuade all of us that he is the Promethean Lear, the King bound on a wheel of fire. Not that the actor wishes to persuade us: he has conceived Lear in miniature, and deliberately and honestly he fills out his conception.

I happen to regard Laughton as a great actor; two or three of his performances have stayed with me across nearly thirty years. But, except as Angelo, quartering the stage in restless agony, he has never been a major Shakespearian. That voice, rapid and sibilant, quick-gushing over gravel, lacks the colour and the swell for high verse. Laughton's Lear cannot for a moment govern the storm, even though the Stratford director (Glen Byam Shaw) has seen to it that there is nothing of what Charles Lamb called "contemptible machinery," and that Shakespeare's language is permitted to do its work unaided. Still, I have known lesser artists than Laughton make far more of the speech. One does need in this part the brushes of comets' hair, and at Stratford the actor is resolved inexorably to use a mapping-pen, the fine stipple instead of the broad, flowing stroke.

True, his pathos comes over in the terrible meeting with blinded Gloucester—here the lines are closely and delicately dissected—and in the quadruple "Howl!", one of that astonishing set of "Lear" repetitions, as the King enters with the body of Cordelia. There glory shines; elsewhere the actor works with extreme care but (I speak for myself) without invariably rousing the emotion. I shall recall a bulky, half-complacent, half-petulant old man, his face framed in soft white hair, and with eyes that can have the sudden hurt look of a terrier refused his bone. It is a performance of some quiet intimate pathos and, at the last, true heartbreak; but I shall not think of it, in retrospect, as royal Lear. One line does linger with me, as single lines have a way of doing. In the scene with the daughters, when relentlessly all is stripped from him, Lear says to Goneril, "And thou art twice her love." In some ways the slight charged pause before the last word



A RARE COMBINATION OF ACTING AND WRITING: MISS TINA (FLORA ROBSON), MISS BORDEREAU (BEATRIX LEHMANN) AND "H.J." (MICHAEL REDGRAVE) IN A SCENE FROM "THE ASPERN PAPERS"—AN ADAPTATION OF HENRY JAMES'S NOVEL SET IN VENICE—AT THE QUEEN'S THEATRE. (FIRST NIGHT, AUGUST 12.)

Throughout, Vivien Leigh gazes blandly into the eye of the preposterous, and appears to say, in effect, "How pleasant to meet you!"; I remember also Anthony Quayle as he wrestles with an absurd form of arithmetic that seems to him to have no logical reason for disturbing his day; and Max Adrian, as a prince with a mission who could not well be more matter-of-fact in this ridiculous Paris. Yet the night, for all its incidental romping beneath the swag of Cupids designed by Roger Furse, is curiously incomplete. Probably we miss what somebody in another play—and I wonder which—calls the cataracts and hurricanoes. I still prefer "Caught Napping."

THE NEW ELIZA DOOLITTLE: MISS ANNE ROGERS IN "MY FAIR LADY."



MR. ALEC CLUNES AS PROFESSOR HIGGINS STARTING WORK ON HIS NEW ELIZA: MISS ROGERS HAS TAKEN OVER THE PART FROM MISS JULIE ANDREWS.



A MOMENT DURING THE SCENE AT ASCOT: ELIZA, OVER-EXCITED BY THE RACE, ABOUT TO COMMIT A GAFFE.



ELIZA SUPERB IN HER BALL DRESS AT THE EMBASSY: MISS ROGERS HAS ALREADY PLAYED THE PART ON TOUR IN THE UNITED STATES.



AN ENCHANTING STUDY OF MISS ROGERS DRESSED AS ELIZA FOR THE BALL: SHE WAS GIVEN THE SARAH SIDDONS AWARD FOR HER PERFORMANCE IN AMERICA.

Miss Anne Rogers, who took over the part of Eliza Doolittle in "My Fair Lady" in its current run at Drury Lane from Miss Julie Andrews on August 10, has already had a long experience of the part. She gave 700 performances while on tour in the United States and was given the Sarah Siddons Award for the best actress of the year for her work. She first made her name for

her performance in the long-running musical "The Boy Friend," in which she played Polly Browne, the heroine—a part she created and played for three-and-a-half years. She left it to go on tour with "My Fair Lady" and now has returned to London, where she first made her name. Mr. Alec Clunes took over the part of Professor Higgins from Mr. Rex Harrison.

Photographs by Cecil Beaton.



IN AN ENGLISH GARDEN.

GREENHOUSE GRAPES AND MELONS.

By EDWARD HYAMS.

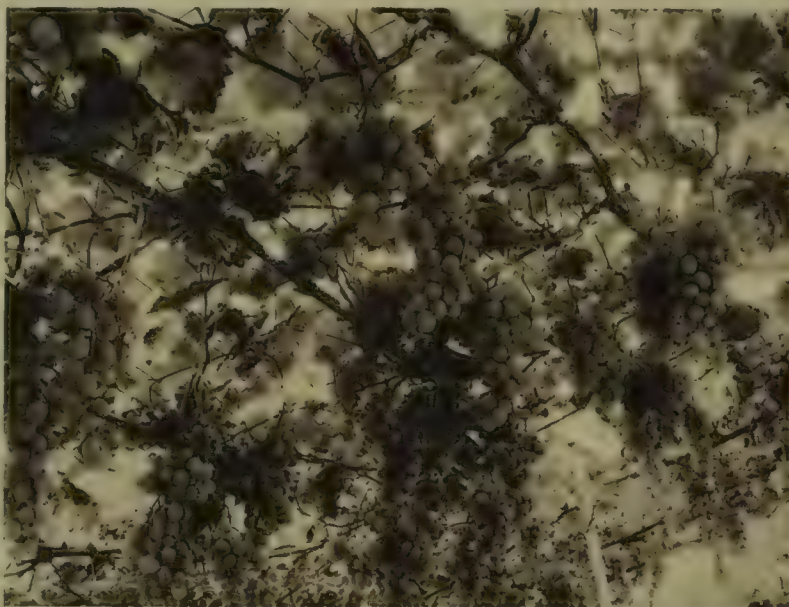
THE *Muscat of Alexandria* in the greenhouse is in its twentieth year. (One of the few disadvantages of gardening is that you are surrounded by evidences of the rate at which time is passing!) I built the greenhouse and planted the vine just before going to the war. When I came back seven years later it had grown without restraint, and reshaping it was like a jungle-clearing operation. It now completely clothes the whole inner span of the house, an area of 300 sq. ft. Its crop this year is about average in quantity, but superlative in quality: it consists of 157 bunches of grapes and experience enables me to estimate their average weight at 2 lb. About 2½ cwt. of fruit. We eat all we want and the rest is sold locally. The annual money revenue from that vine is something like £30.

Pundits will tell you that this supreme grape, better in flavour, texture and appearance than any of the 200 or 300 varieties I have tasted, and, by general repute, best of the several thousand kinds in cultivation, can not be grown excepting in a hot-house. This simply is not true. What is true is that it can not be given that super finish, or grown to quite the size of berry, which was expected of the great 19th-century head-gardeners, with their enormously expensive vineries. The berries on our bunches are from ¾ in. to 1¼ ins. long. The bunches weigh, as I have said, between 1 and 3 lb., rarely 4. And the fruit, when it is what we call ripe, is pale amber dusted with a beautiful silvery bloom; very sweet, and of that rich muscat flavour which distinguishes the variety.

Our method with the vine is as follows: the house has no heating installation, but in February a large blue-flame oil-stove is kept going in the house day and night. This brings the vine into leaf about a month earlier than would otherwise be the case. In due course the flower-bearing shoots are stopped by pinching-out at three leaves beyond the flower-cluster. Secondary flower-clusters are removed. The shoots are tied to the overhead grid of wire, which is held by vine-eyes at 15 ins. from the glass. Ideally, that distance should, in my opinion, be nearer 2 ft. Not only is there never the slightest difficulty in setting fruit without any interference from us, but the set is usually excessive, so that the subsequent labour of thinning is very troublesome. This thinning is carried out as soon as the grapes are the size of peas—small, French peas, not gigantic English ones. I shall not attempt to describe the operation here: it requires experience and a good eye, rather than skill. The heater, by the way, is generally discontinued in early May. The actual date does not depend on the vine at all, but on the state reached by the hundreds of melon plants which are propagated in the same house. As the roots of the vine are outside the house, and not in a special bed but under the drive, no manuring or watering is ever done. As to ventilation, we have a simple rule of thumb: we open the lights if it feels too hot and close them if it feels too cold. After thinning, more stopping and pruning of excess growth is carried out. Then, nothing whatever is done until the grapes have to be picked; excepting that owing to the determination of this extraordinarily vigorous plant to grow twice the size of its house, some rather rough and casual pruning has to be done whenever we have time for it.

Now, any experienced head-gardener with a viney, reading this, would have a fit: he would tell of the need to feed the vine, to water it, to prune its roots from time to time; he would talk of subtleties in the control of warmth, ventilation and humidity; of special

measures to ensure setting of the fruit. He would probably assert that it is impossible to grow *Muscat of Alexandria* my way. Yet we do it, we have regular and good crops, and if the house were thrice the size the vine would readily fill it and bear half a ton a year. Grown in a hot-house by a skilled head-gardener, the grapes would be larger and they would be finished a deep tan colour, rather like the skins of our sun-bathers this fine summer. Our success, in conditions which might be called unsuitable, is of course due to two factors: the roots of the vine are in deep brick-earth, and there is no better for fruit; they have probably extended well across the drive and into the rose-bed, where they receive some of the benefit of manures and fertilisers intended for the roses; the greenhouse, built on the south, brick wall of the house, is quite exceptionally warm.



THE "MUSCAT OF ALEXANDRIA": A TWENTY-YEAR-OLD EXAMPLE OF THIS SUPREME GRAPE WHICH MR. HYAMS SAYS IS "BETTER IN FLAVOUR, TEXTURE AND APPEARANCE THAN ANY OF THE 200 OR 300 VARIETIES I HAVE TASTED." (Photograph by Douglas Weaver.)

The generous muscat is not the only vine in that house. There is also a single-rod vine of the new hybrid variety *Muscat de St. Vallier*, a product of the Seyve-Villard breeding nursery at St. Vallier. This vine is half muscat and for the rest of its parentage, American—that is, not *Vitis vinifera* at all. Which species Seyve-Villard used in its breeding is not known. At all events, it is a fast-growing, disease-resistant vine with very slender stems; and it is excessively productive, so that about half the bunches of grapes have to be removed. The grapes, finishing a deep amber, but very good when pale gold, have a very heavy silver bloom; smaller than those of *Muscat of Alexandria*, they are sweet, juicy and of good

muscat flavour; they ripen a month before *Muscat of Alexandria*, well before the standard *Black Hamburg*. The second vine in the house is, again, a single rod of the variety *Muscadoule*, another of the French hybrids; this is a medium to large purple grape coming in 1- to 2-lb. bunches of excellent shape. The grapes are sweet, juicy and faintly muscat. The vine will kill itself by over-bearing unless at least 75 per cent. of its crop be removed in the fruitlet stage. Neither of these hybrids require much, if any, thinning, setting just about the number of berries they can bring to full size. *Muscadoule* ripens roughly a fortnight later than *Muscat of Alexandria*.

These times of ripening are necessarily rather vague, for this reason: secondary bunches apart, there is rarely more than a week between the ripening of the first and last *S. Vallier* bunches. But the *Alexandria* has a very long season. It sounds improbable, I know, but between the day that the first bunch reaches a point of maturity when it is palatable, that is sweet and flavoursome without being absolutely ripe, and the day when we gather the last, deep amber bunch, there is usually a period of two months. There are two reasons for this: the vine responds remarkably to very local warmth; the bunches immediately over the spot where we place the heater in February, are always larger and ripen earlier than any other on the vine. Secondly, the bunches high on the vine, at the top of the span, are better exposed to sun than those lower down, in the deep shade of the vine-leaves; so they ripen next. As *Muscadoule* ripens all its grapes more or less at once, owing to its situation in the house, its season overlaps with *Alexandria*.

From this small house we began to eat grapes on July 10 this year; and we shall be eating them—and selling some—until the end of October, or perhaps not later than the 15th.

It seems to me that there is no more profitable use of a small greenhouse than to plant it with vines. And my rule would be, one good muscat and two or three muscat-hybrids; sweet-water grapes, e.g., *Black Hamburg* are so poor by comparison, unless mere size of berry is your criterion, that they are not worth greenhouse space.

I mentioned raising melon seedlings in the same house. These go out under cloches or under transparent plastic temporary covers, on or about May 15. Hitherto we have always grown the cantaloupe *Tiger*, beginning to take the crop in the second half of August. But it occurred to us a year or two ago that there might be other varieties, apart from the well-known commercial ones such as *Dutch Net*, which might be better. At all events, having obtained seeds from America, we have grown about thirty varieties and although it will be some years before we can publish any conclusions worth attention, one or two interesting points have already emerged. One is that there are excellent American varieties of small- or medium-sized melons which set fruit more freely than *Tiger*, can mature a greater number of melons per plant, and, what is especially interesting, are markedly earlier than *Tiger*, that is, take fewer weeks from seed-sowing to maturity, a factor of the utmost importance in our climate. It is even possible, although of this we are not yet sure, that there may be one or two capable of setting and maturing fruit unprotected by glass, in Kent. But it should be emphasised that all, without exception, need glass protection during May and June—the cloches might be removed thereafter; and this year is hardly a fair test, being as exceptionally fine as last year was exceptionally miserable.

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Four Wheels Conquer Monserrate



The hot sun burns down upon the scorched slopes of Monserrate, rising majestically to the East of Bogotá. The narrow trail, used by pilgrims labouring

their way up to the chapel on the summit, looks most precarious for men on foot and for the occasional mule making the ascent.

Don Pablo of Bogotá climbs down from his mule, spits into the dust and continues on foot cursing to himself, quietly, as he is, after all, on his way to the sacred shrine. Suddenly he stops short. Wasn't that the noise of an engine? No, impossible, here among these rocks and ravines. He looks back—he sees a cloud of dust below him—he hears men's voices and there, there is a truck steadily climbing the rock-strewn trail. The dust catches Don Pablo with mouth open. He retreats to a safe place with his trembling mule and finds no words in reply to greetings from the passing vehicle.

He follows the cloud of dust, only beginning to believe what he has seen. Having reached the summit, he gasps again, seeing this devil's conveyance mounting the stone steps to the chapel. What next? he wonders in fear.

Next day the local paper tells Don Pablo that his vision was fact. J. Weber is acclaimed as the first to succeed in driving a road vehicle up the Monserrate. Full praise is given to the Mercedes-Benz UNIMOG for this achievement—without outside assistance. Journalists, invited for the trip, had considered their families and gone by the funicular railway.

Don Pablo often tells this story, and coming to the end he lifts up his voice when he says: "It's fantastic, but true. I myself was there."



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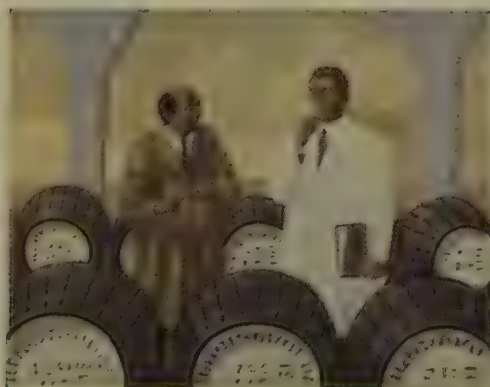
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that when it was first minted 130 years ago, this George IV threepenny piece would have paid the whole tax on a bottle of Mr. Ballantine's Whisky. There have been some changes since then! The superlative quality of Ballantine's, however, remains unaltered.



that the 42 mature "single" whiskies which go to make Ballantine's are tested always by smell. To taste them is unnecessary, and would not in fact be specially enjoyable, for it is the subtle blending of so many chosen "singles" which creates the magic of the superb Scotch.



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UNUSUAL PHOTOGRAPHS—NO. 3. GEORGE AND THE DRAGON UP TO DATE.



AN ALARMING PET : A KOMODO DRAGON BEING TAKEN FOR A GENTLE STROLL BY A SMALL BOY.

The boy, as he takes the dragon round the Frankfurt Zoo, seems perfectly at home with this rare "questin' beast." The Komodo dragon is the largest living lizard and is found only on the islands of Komodo, Padar, Rincha and the west coast of Flores, in the Indonesian Archipelago. The males

sometimes grow to the size of 10 ft. and, as is not unusual in any creature, their tempers get worse with age. This dragon, whose tongue, however, is extended in the search for prey, would not appear to have inherited the family lack of sociability but ambles mildly along in leading strings, with an air of repentance.

The wax models described on page 39 of our August 15 issue were not, as stated, the property of Madame Tussaud's, Ltd.



IN this lavishly illustrated volume the Rector of Lincoln College, once Headmaster of Winchester, publishes in permanent form the series of lectures he gave at Edinburgh in 1956 and which were six years in the making.

Most of us at one time or another, in wandering round a cathedral or turning over the pages of a catalogue of mediæval manuscripts, have been conscious of some memory from a more distant past without being able to pin it down to a specific example. Here, in more than 300 photographs and a lengthy, closely-argued text, is chapter and verse and a fascinating series of resemblances and differences. For example, nothing is more certain from these illustrations than that four of the painters of the Winchester Bible of about 1170 must have been familiar with Byzantine mosaics in Sicily, while, as a contrast to typical Romanesque work, the relief at Rheims of "Adam and Eve" by the sculptor known as the Antique Master (work which suggests the natural grace of late classical sculpture, but which was done about 1230) is shown next to the same theme from the bronze doors at Hildesheim of about 1010. Then—going back to sources—there is the head of Elizabeth from the Visitation group by the same so-called Antique Master illustrated facing a late classical head of the third century A.D., the head of Phædra's nurse from a sarcophagus in the Louvre. This is followed by several photographs showing the sculptor's sources and associations, with a fascinating study of drapery and stance, from which we can make our own deductions, comparing the Virgin and Elizabeth from the Visitation group of fifteen years later, and both of these with the head of the Venus de Milo and with the Trentham Lady—a Roman version of an original of the 4th century B.C.

No less illuminating is the analysis of those astonishing carvings at Chartres which remain in the memory no less than the windows, and especially the resemblance of the typical "archaic smiles" found on Greek and Cypriot statues of the 5th and 6th centuries B.C. Equally striking is the resemblance between the reeded drapery seen in some Chartres sculptures and that on the Hera of Samos, now in the Louvre, and other Greek works of about 500 B.C. The author preserves an open mind on the question of whether this Master of the Archaic Smile, as he calls him, had actually been influenced by Greek carvings of this early period, pointing out that nearly all these works were buried when the Acropolis was levelled after the Persian invasion and were only recovered in modern times. But there were, he adds, other centres besides Athens, and a good many archaising copies produced in the reign of Augustus. On the whole, he inclines to the view that this highly distinctive Chartres sculptor is more likely to have been influenced by the latter, but admits that the case is "not proven." On the other hand, the resemblances—in addition to the smile—are so marked that it is difficult to believe that they could have been evolved anew without any conscious reference to the distant past.

Thousands of us have been to Chartres; few of us (I know I have not) have ever set foot in the Church of St. Bartholomew at Liège; yet here, points out Mr. Oakeshott, is one of the great works of religious art of all time—a bronze font made between 1111 and 1118 almost certainly by a master named Renier of Huy, and widely different

A PAGE FOR COLLECTORS.

By FRANK DAVIS.

RENAISSANCES BEFORE THE RENAISSANCE.*

in character and sentiment from any other known sculpture—whether bronze or stone—of its day. It must be derived from some classical source and it is suggested that "there are several details which make it likely that the artist not only had studied 'classical' works but had actually observed with care examples of Greek art of the great period." There follow details—the type of hairdressing like that of 5th-century Athens, the

All this and much besides leads on to more and more comparisons and analogies, with numerous deviations along the by-roads of art history. "From time to time mentions occur of actual classical collections. Antique statuary is said to have been brought by Henry of Blois, Bishop of Winchester, by sea from Italy to England, and his interest in these classical works gave rise at Rome to criticism. His answer suggested that there were other ways in which false gods could be worshipped and that the Curia at Rome was expert in some of them. But the criticism may be significant. Throughout the 12th and 13th centuries the view persisted in many quarters that pagan art was positively dangerous. . . . The cult of classical art, however, remains localised, partly because of this suspicion. An artist here, another there, becomes deeply interested in it . . . and the classical collections disappear without trace"—with the exception of the heterogeneous objects preserved in the treasures of various Cathedrals and Abbeys and made to serve for Christian use.

Of these we are given several beautiful examples, such as the head of an antique statuette re-used as the head of Christ on a cross, a cross in the Treasury of the Minster at Aachen, given by Otto III, with a magnificent first-century cameo of the young Augustus in the centre and the pagan ivories Bacchus, Venus, Mars—incorporated in

the sides of the pulpit at Aachen. Then there is the Treasure of St. Denis—a 3rd century B.C. sardony cup which once had a precious 12th-century mount and an antique porphyry vase which Abbot Suger, the greatest of all abbots of St. Denis, used as the body of a winged eagle (Plate 105B). He describes how he adapted for the service of the altar, with the aid of gold and silver, a porphyry vase "made admirable by the hand of the sculptor and polisher, after it had lain idle in a chest for many years."

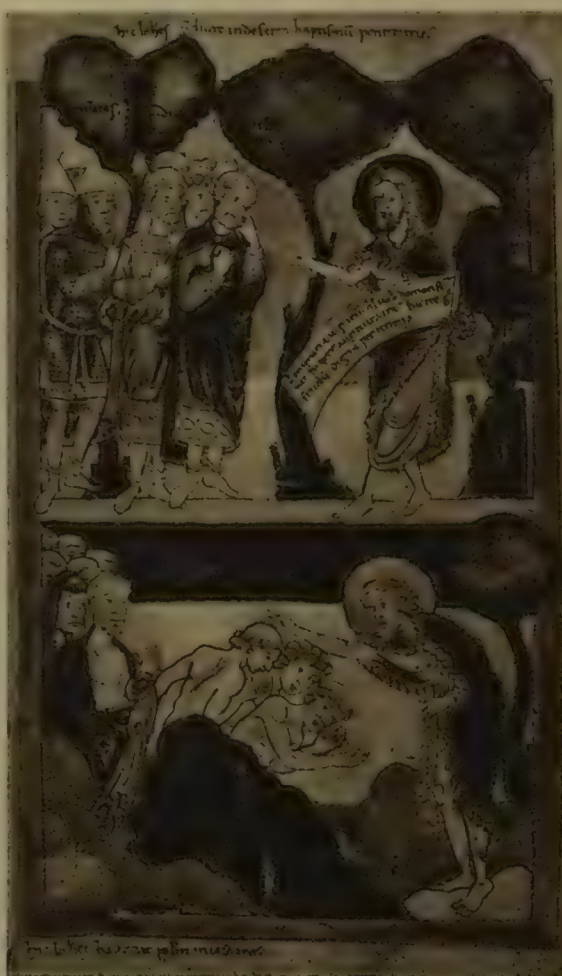
Evidently there were two opposing opinions throughout these centuries: that of the narrow "unco guid," scared out of their wits by any work of art from the hand of the heathen, and that of the educated minority, marvelling at the accomplishment of the antique world and eager to preserve it for the glory of God. Almost the final words of the text and the final page of illustrations deal with the transformation of French mediæval sculpture by the humanism of classical art into something very different—into the warm humanity and tenderness of the 14th and 15th centuries. Here the contrast could not be more pointed, for the piece of classical sculpture chosen is the serene, remote Juno, and the infant Hercules from the Vatican Museum, a not very exciting Roman work of the beginning of our era, while the French group is the 15th-century Virgin and Child from Toulouse (Plate 143 A and C), surely one of the major enchantments of that marvellous century. In placing the dry formality of the one against the moving grace of the other, some may feel that the author is overstating his case; perhaps a Byzantine Madonna might have illustrated the theme with no less eloquence and greater dignity.

It is a book to be studied at leisure, turning continuously from text to illustrations, and wonderfully stimulating to the imagination, following in its complete but comparatively narrow field something of the method used by M. André Malraux to analyse the whole range of artistic expression.

* "Classical Inspiration in Mediæval Art." Rhind Lectures for 1956, by Walter Oakeshott. Illustrated. (Chapman and Hall; 5 guineas.)



A DETAIL FROM THE EARLY 12TH-CENTURY LIEGE FONT, SHOWING THE FINE CARVINGS, CLASSICAL ANALOGIES FOR WHICH ARE ILLUSTRATED IN THE BOOK REVIEWED BY FRANK DAVIS ON THIS PAGE: "CLASSICAL INSPIRATION IN MEDIEVAL ART."



A 12TH- OR 13TH-CENTURY DRAWING BASED ON THE LIEGE FONT. NOTE THE SIMILARITY IN THE TREES, THE BENDING FIGURES, THE OUTSTRETCHED HAND AND IN THE CLOTHING.

These illustrations from the book "Classical Inspiration in Mediæval Art" are reproduced by courtesy of the Publishers, Messrs. Chapman and Hall Ltd.

figures bare on the right shoulder, as on a 5th-century Greek vase, the simplicity and naturalism of the drapery, the sensitivity of the modelling of the naked body. (Plates 112-115.)

FROM RENAISSANCE FLORENCE TO IMPRESSIONIST FRANCE.



"SUSANNA AND THE TWO ELDERS," BY REMBRANDT VAN RIJN (1606-1669): A DRAMATIC PAINTING AT THE WILDENSTEIN GALLERY. (Oil on panel: 19½ by 16½ ins.)



"THE JOLLY TOPER," BY FRANS HALS (c. 1580-1666): PAINTED BETWEEN THE YEARS 1627 AND 1630. (Oil on canvas: 23½ by 19½ ins.)



"SAINT JEROME IN THE WILDERNESS," BY JOACHIM DE PATINIR (c. 1485-1524): A MOST LOVELY PAINTING IN EXCEPTIONALLY GOOD CONDITION. (Oil on panel: 13½ by 10½ ins.)



"VIEW OF VENICE," BY FRANCESCO GUARDI (1712-1793): A STUDY OF MASTS AND SAILS; ONE OF THREE GUARDIS. (Oil on canvas on panel: 11½ by 17½ ins.)



"VILLA PAMPHILI, ROME," BY CAMILLE COROT (1796-1875): AN EARLY LANDSCAPE, AND ONE OF THE GEMS OF THE EXHIBITION. (Oil on canvas: 10½ by 14½ ins.)



"ADORATION OF THE SHEPHERDS," BY BICCI DI LORENZO (1373-1452): ONE OF SEVERAL RENAISSANCE PANELS IN THE EXHIBITION. (Oil on predella panel: 10 by 24½ ins.)

It is a rare pleasure to be able to see in one temporary exhibition of only forty-four paintings—all of them for sale—works by artists as far apart in style and in time as Patinir and Van Gogh, Cranach and Renoir, Gaddi and Gauguin. And it is especially interesting when a number of the pictures on view are fine and yet unusual examples of the artists' works. These include an interesting study of dahlias by Delacroix, an attractive sombre river scene by Renoir, and an early—also sombre—canvas by Van Gogh called "Le Tisserand." The exhibition is at the Wildenstein Gallery, 147 New Bond

Street, London, and will remain open until the end of September. A good proportion of it is devoted to French painting, and of these the largest number are of the Impressionist period; but there are also three canvases by Boucher and two by Delacroix, while the earlier centuries are represented by Caron in the 16th and Bellange in the 17th. There is also an attractive group of early Renaissance panels: two wings of a diptych by Gaddi and Daddi, a Benvenuto di Giovanni and the delightful Bicci di Lorenzo illustrated here. The Low Countries are well represented by Rembrandt, Hals, Cranach and Patinir.

SPACEMANSHIP, as any regular reader of mine may have guessed, is not my cup of atomic tea. Rockets and satellites may launch themselves into their sinister orbits, but they inspire me with nothing but gloomy disinterest. I know that this will stamp me as an old-fashioned ostrich, but I would rather bury my face in the kindly sands of the Sahara Desert than endure the teleological lectures which scientists, and pseudo-scientists, are now prepared to inflict upon me with such ghoulish readiness.

Setting all these reflections aside, I courageously embarked on a novel—I suppose I may call it a novel?—by Edmund Cooper, called *SEED OF LIGHT*. Here is a book which is intended to be immensely solemn and symbolic. It reads like the sermon of a Calvinist preacher in the days of Queen Elizabeth I. (Mercifully, it is not so long.) It envisages a state of affairs after the next atomic war, when ten members of a "life-unit," carefully paired off by sexes, set off in a star-ship to refound humanity on another planet. The fact that they are given names like Newton, Lavoisier, Jung, Atlanta and Troy may heighten the symbolism, but makes them all too boring for adequate distinction as individuals. They tour round the solar system for "light-years," and, after a number of disappointments with various inhospitable stars, they—or, rather, their descendants, procreated rather uncomfortably in the space-ship—return (of course) to Earth. Serve them all right, say I. It is a pity, because Mr. Cooper makes some of his characters pronounce sentiments which any man of sense would roundly applaud. His Professor Bollinden, helping himself to a large drink, says: "During the last few days, I have developed a new respect for alcohol. If you drink enough of it, it stops you being scientific and gives you time to be human." But there is not enough of this. The answer, so far as I am concerned, is a hydroponic lemon.

I would much rather read a novel about a really silly woman, such as I found in Mr. Skeffington, by "Elizabeth." Lady Frances Skeffington, the daughter of a duke and married to a Jewish commoner, has long got rid of her husband and run through a gamut of lovers. Haggard and ageing, she runs through them again, finally taking her poor Jew, now blind and penniless, back to her heart and to the handsome settlements which he made on her while he was rich. It is a simple story, told with delicacy and irony. I greatly enjoyed it.

Drifting through the novels available to me, I chanced on *THE SCHOONER*, by Freddy Drilhon. This book has been translated from the French—and translated with real brilliance—by Viola Garvin. I believe that I am as quick as anyone else to spot clumsy gallicisms, and this novel does not contain a single one. It is not, in itself, exciting: the story of a boy who helps to build a schooner, and coasts around the Polynesian islands in it. But it has genuine warmth and sincerity.

My next two novels can be dispatched very quickly. I really do not care whether A. A. Fair and Eric Stanley Gardner are identical, but I care very much indeed whether either one or the other writes about tolerable people. Perry Mason may be all right, but Bertha Cool—(shades of a Turkish bath and a Finnish *sauna*!)—is not. As a human being, rather than as a detective, she revolts me, and I have a nasty feeling that her creator wants me to be revolted. O.K.! He has won. Let anyone who will, read *THE COUNT OF NINE*—by "A. A. Fair," this time—and tell me whether I am wrong. Jade idols, blow-pipes, and murders notwithstanding, I cannot stomach Miss Cool. Nor could I get on with *AMAZING SEA STORIES, NEVER TOLD BEFORE*, by Edward Rowe Snow. If American horrors at sea appeal to you, you may like it. To me, the mysteries faded into obscurity, and I was left with the stale taste of beery narratives recounted by some U.S. "Ancient Mariner" in a four-ale bar.

Mr. Snow's book provided a contrast with *NO FURTHER WEST*, by Dan Jacobson, a university don who has had the opportunity of living in California and telling us what he felt about it—objectively and kindly. Mr. Jacobson has a clear eye. When his wife asked him what American students looked like, he answered "Like dogs," because all the male students were "shorn, unbeautiful, bristling, an endless procession of boys with convict-crops." Yet he has the kind of sense which penetrates to the heart of the matter. He sees that there is an air of violence in America. "For all the gentleness with which it so often finds expression," he writes, "the American will is implacable, and can never rest." That, I suppose, is what makes Mr. Khrushchev so uneasy.

I doubt if the Kremlin would find grounds for uneasiness in Dr. Nelson Glueck's *RIVERS IN THE*

A LITERARY LOUNGER.

By E. D. O'BRIEN.

DESERT, even though it is all about the Negev, that famous trouble-spot in Israel. This is a remarkable book, using archaeology to confirm biblical history in a manner which sounds, to the inexpert reader, most convincing. Some will think

suggestion that King Manasseh "did that which was evil in the sight of Jehovah." But Dr. Glueck is too important a scholar to bother about laymen's doubts.

Lord Kilbracken's choice of title, *A PEER BEHIND THE CURTAIN*, exactly illustrates his attitude to life, which is merry, inquisitive, slightly brash and schoolboyish. He writes of two trips which he took to the Soviet Union on behalf of the *Daily Express*, and the ingenuity which he showed in gate-crashing a party in order to interview Mr. Khrushchev—I don't seem to be able to get away from this formidable figure this week!—and in attending the May Day ceremonies in Red Square certainly emulates the feats of professional journalists.

George Izzard, landlord of The Dove, also gives us his personal reminiscences in *ONE FOR THE ROAD*. With respect, I preferred the publican's book to the peer's, but that may be because the right kind of publican takes on some of the leisurely kindness associated with his hospitable trade, while peers rushing around behind the Iron Curtain are not so fortunate. The aspiring publican, says Mr. Izzard, "should be twenty-five, and he should have a wife who is as interested in the job as he is. He should have about £5000 in capital, and he should be prepared to work eighty hours a week for the rest of his working life." Not everyone's cup of tea—or half-pint of bitter!

A third volume of reminiscences, by Mr. A. J. Healey, founder of Messrs. Healey and Baker, is modestly called *AN ORDINARY MAN'S ODYSSEY*. The trouble is that it is just that. Mr. Healey was born in 1880, and is now living in South Africa. He went to school, grew up, fought in the First World War, became a successful business man, served as a Home Guard in the Second War, married, retired. Was it really worth writing 132 pages to tell us about it? I am not sure. Estimable and worthy Mr. Healey, why call your life an "odyssey"? Odysseus did at least have some adventures which were interesting and remarkable!

BLACK SATURDAY is an attempt by Alexander McKee to establish exactly what happened when the *Royal Oak* sank at her anchorage in Scapa Flow a few weeks after the outbreak of war in October, 1939. The public has always assumed that she was sunk by torpedoes fired from a German U-boat which had made its way past the Scapa defences, but many of the men who survived the disaster were reluctant to believe this. Inevitably, there were rumours of sabotage. The Germans themselves announced that the successful attack had been made by Gunther Prien, in command of *U-47*, and this officer was later decorated by Hitler himself with the Knight's Cross of the Iron Cross. The difficulty is that his log contains statements which could not possibly be true. Mr. McKee comes to the conclusion that Prien did in fact torpedo the *Royal Oak*, but not in the manner which he describes. The book contains an enthralling, if horrifying, account of the whole tragedy as recounted by survivors.

American gangsters have always seemed to me to be a somewhat specialised study—and not nearly such fun as cowboys—so that I found it hard to work up much enthusiasm for *THE BIG BANKROLL: THE LIFE AND TIMES OF ARNOLD ROTHSTEIN*, by Leo Katcher. Rothstein was shot in 1928, and I am very sorry indeed to learn that, in Mr. Katcher's view, he "exerted a major influence on to-day's society; that he helped shape it, that it bears his mark." Tush! as Eric would have said.

BOOKS REVIEWED.

- SEED OF LIGHT*, by Edmund Cooper. (Hutchinson; 13s. 6d.)
MR. SKEFFINGTON, by "Elizabeth." (Heinemann; 12s. 6d.)
THE SCHOONER, by Freddy Drilhon. (Arthur Barker; 18s.)
THE COUNT OF NINE, by A. A. Fair. (Heinemann; 12s. 6d.)
AMAZING SEA STORIES, NEVER TOLD BEFORE, by E. R. Snow. (Redman; 15s.)
NO FURTHER WEST, by Dan Jacobson. (Weidenfeld and Nicolson; 16s.)
RIVERS IN THE DESERT, by Nelson Glueck. (Weidenfeld and Nicolson; 30s.)
A PEER BEHIND THE CURTAIN, by John Godley, Lord Kilbracken. (Gollancz; 18s.)
ONE FOR THE ROAD, by George Izzard. (Parrish; 16s.)
AN ORDINARY MAN'S ODYSSEY, by A. J. Healey. (Titus Wilson; 15s.)
BLACK SATURDAY, by Alexander McKee. (Souvenir; 18s.)
THE BIG BANKROLL, by Leo Katcher. (Gollancz; 21s.)

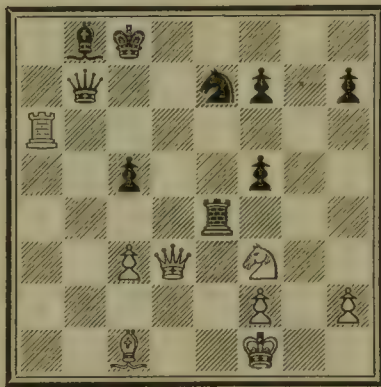
CHESS NOTES.

By BARUCH H. WOOD, M.Sc.

IT may sound extravagant but I am prepared to maintain that nobody ever had such a first week of vicissitudes in the British Championship as Leonard Barden this year. By the week-end, he must have been feeling rather punch-drunk. Let the games speak for themselves. Round 1 (Queen's Gambit Accepted):

| BARDEN White | CLOUGH Black | BARDEN White | CLOUGH Black |
|-----------------|-----------------|-----------------|-----------------|
| 1. P-Q4 | P-Q4 | 15. P-QR4 | R×Rch |
| 2. P-QB4 | P×P | 16. B×R | P×BP |
| 3. N-KB3 | N-KB3 | 17. RP×P | RP×P |
| 4. P-K3 | P-K3 | 18. Q×P | B-Q3 |
| 5. B×P | P-B4 | 19. P×P | R-N1 |
| 6. Castles | P-QR3 | 20. Q-N1 | Q-Q2 |
| 7. N-B3 | P-QN4 | 21. B-B2 | N-K2 |
| 8. B-N3 | B-N2 | 22. B-K4(?) | R×Pch! |
| 9. Q-K2 | N-B3 | 23. K-B1 | B×B |
| 10. R-Q1 | Q-B2 | 24. Q×B | R-N5 |
| 11. P-Q5 | P×P | 25. R-R8ch | B-N1 |
| 12. P-K4 | P-Q5 | 26. Q-K2 | Q-N2 |
| 13. P-K5 | Castles (Q) | 27. R-R6 | R-K5 |
| 14. P×N | P×N | 28. Q-Q3 | P-B4 |

Black.



White.

At this stage, Barden had left himself with barely four minutes for his next twelve moves. Clough had about half an hour. As so often happens, it was Clough whose nerves were the more severely affected. His 33rd move, which is an outright blunder, lost him twenty minutes of his time. Recovering from the shock in praiseworthy fashion, he manages to conjure up a simple trap into which Barden, now compelled to make every move on the instant, tumbles headlong.

| | | | |
|-----------|-------|------------|---------|
| 29. R-KB6 | P-QB5 | 35. N×B | Q-R8ch |
| 30. Q-B2 | Q-Q4 | 36. K-K2 | R-K5 |
| 31. N-Q4 | B×P | 37. N-B3?? | Q×R |
| 32. B-K3 | Q-K4 | 38. Q×R? | P×Q |
| 33. R-R6 | R-N5? | 39. B×Q | P×Nch |
| 34. N-B3 | Q-Q4 | 40. K×P | N-B4(?) |

Phew! Time control at last. Clough has a won end-game and more expert readers may enjoy themselves unearthing a few of the many winning continuations he missed. Barden, on the other hand, provides us with the demonstration (for which we have waited rather long!) of the contrast in technique between a man playing in his 10th British Championship and one playing in his first.

| | | | |
|----------|--------|-----------|--------|
| 41. B-B4 | K-Q2 | 51. K-B4 | N-Q6ch |
| 42. K-N4 | K-K3 | 52. K-K3 | K-Q4 |
| 43. K-N5 | P-B3ch | 53. K-K2 | P-B5 |
| 44. K-N4 | N-Q3 | 54. K-B1 | K-K4 |
| 45. P-B3 | N-B2 | 55. B-N1 | K-B4 |
| 46. B-K3 | N-K4ch | 56. B-R2 | N-K4 |
| 47. K-B4 | P-R4 | 57. K-K2 | N-Q6 |
| 48. K-K4 | P-R5 | 58. K-B1 | K-K4 |
| 49. B-B4 | P-R6 | 59. B-N1 | K-Q4 |
| 50. B-R2 | P-B4ch | 60. B-R7? | |

For instance, have a look at 60...N-K8 now. The disappearance of one pawn on each side now raises Barden's drawing hopes considerably.

| | | | |
|----------|--------|----------|--------|
| 60. ... | P-R7? | 71. K-N3 | N-B8 |
| 61. K-N2 | N-K8ch | 72. K-B2 | N-N6 |
| 62. K×P | N×Pch | 73. B-N7 | N-Q7 |
| 63. K-N2 | K-K5 | 74. B-Q4 | K-Q6 |
| 64. K-B2 | N-K4 | 75. B-N7 | K-B7 |
| 65. B-Q4 | N-N5ch | 76. K-K3 | K-Q8 |
| 66. K-N2 | P-B6ch | 77. K-B2 | K-B7 |
| 67. K-N3 | N-K6 | 78. K-K3 | P-B7? |
| 68. K-B2 | N-Q8ch | 79. K×P | N-K5ch |
| 69. K-K1 | N-N7 | 80. K-K1 | N×P |
| 70. K-B2 | N-Q6ch | 81. B-K5 | K-Q6 |

Here a draw was agreed; if Black advances his pawn, White sacrifices his bishop for it and White's lone knight can never give mate (even two can't).

Dear me! Time up. We shall have to defer the next episode in our tale of wild time-scrambles, won games lost and lost games won, until next week.

that Dr. Glueck is too dogmatic. His identification of the mountain on which Abraham offered to sacrifice his son Isaac may sound a little too good to be true, though his discovery of a figurine of the goddess Astarte—a naughty girl in the ancient Pantheon—seems certainly to support the

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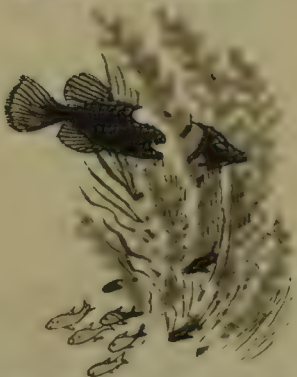


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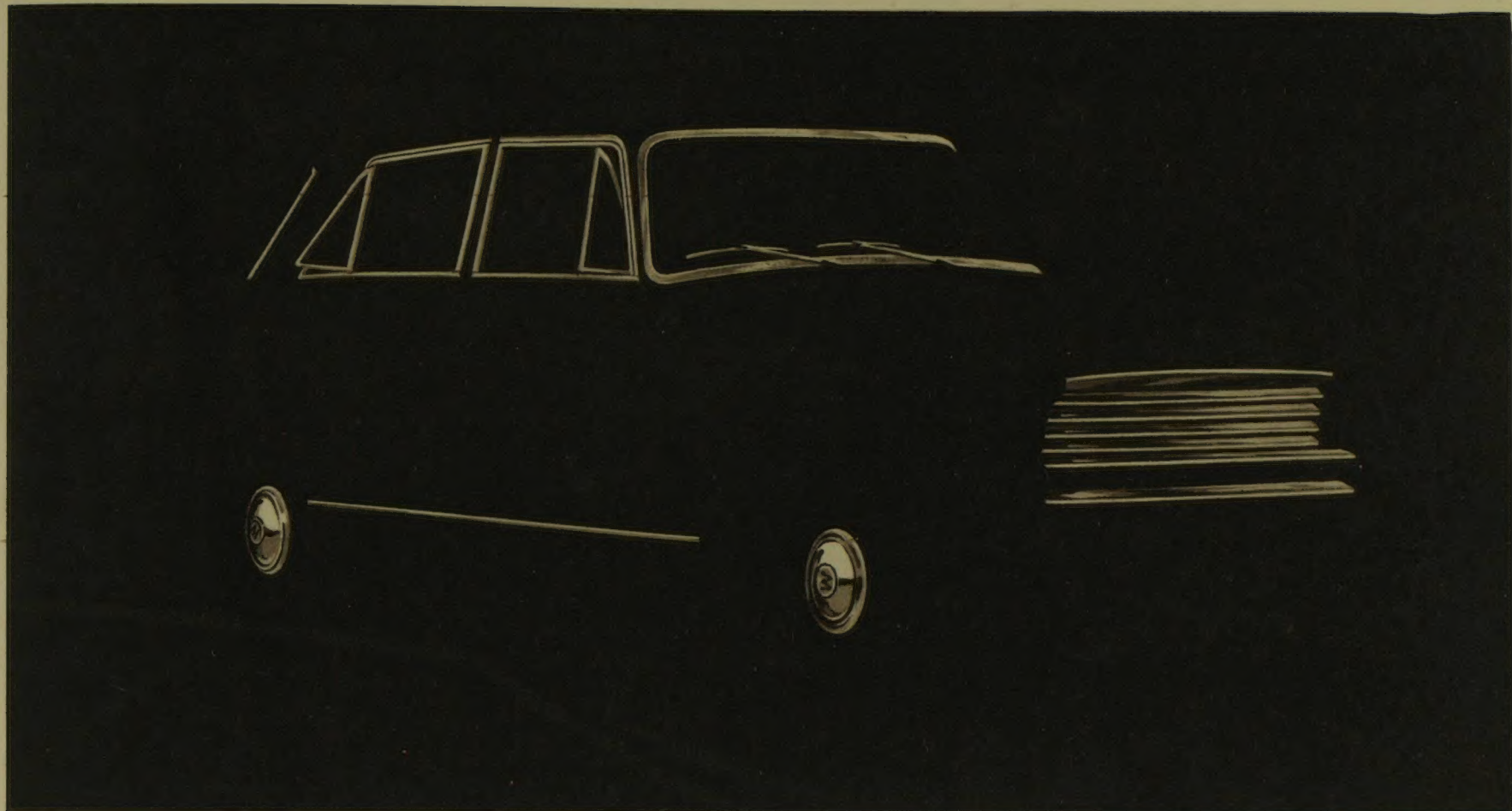
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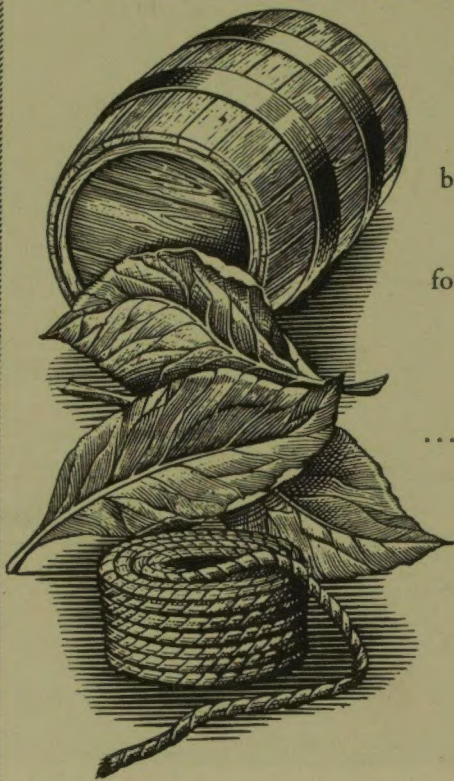
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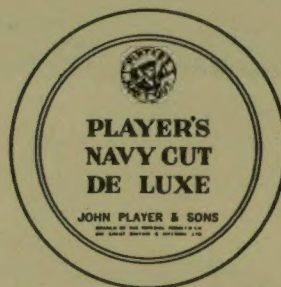


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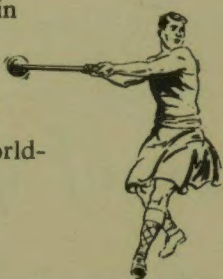


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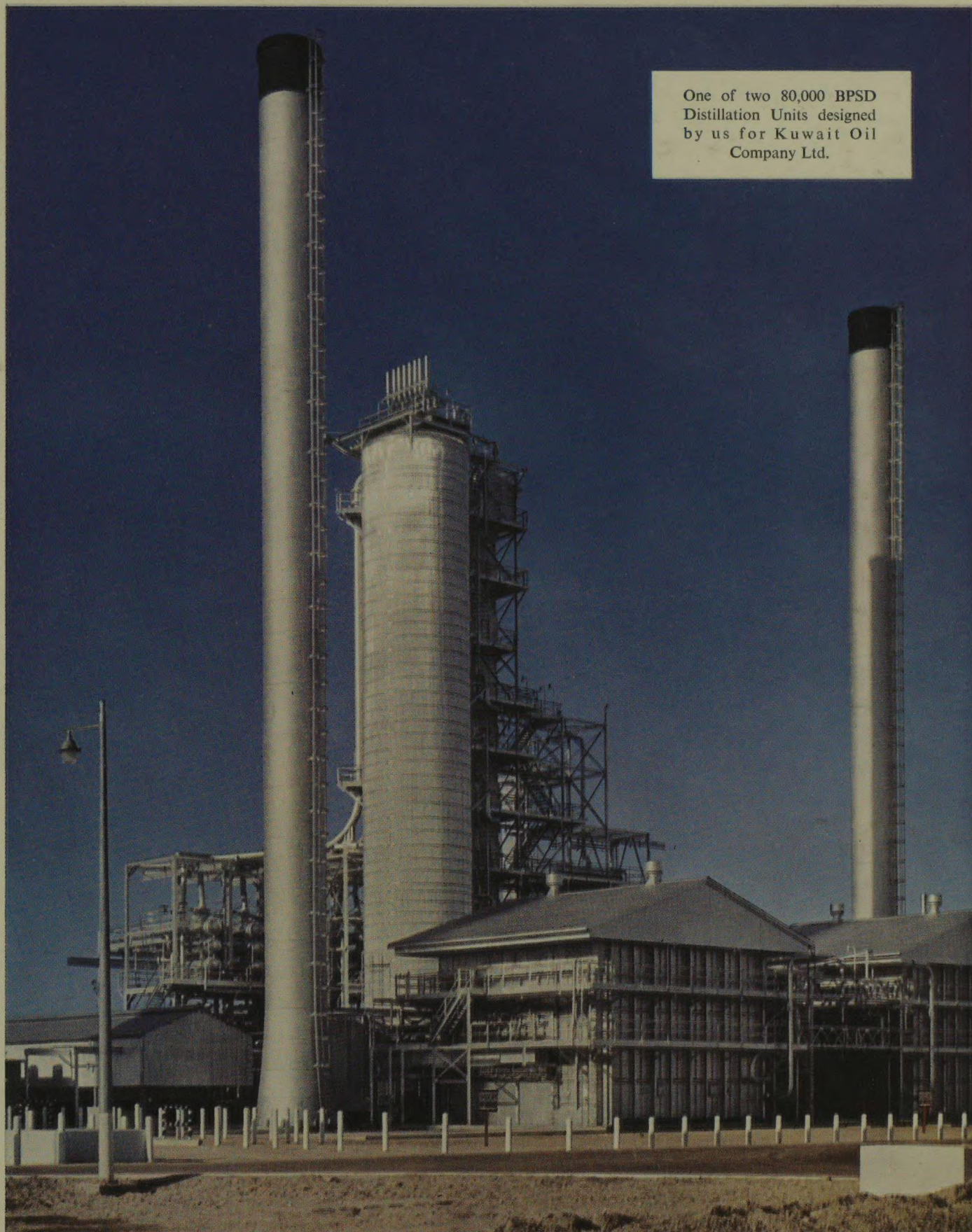
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